

PSYCHOLOGICAL ABSTRACTS

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GENERAL (incl. Statistics)

3952. Boring, E. G., Langfeld, H. S., & Weld, H. P. *A manual of psychological experiments*. New York: Wiley, 1937. Pp. ix + 198. \$1.75.—This manual was prepared for an elementary laboratory course by most of the collaborators of *Psychology; A Factual Textbook*. 54 of the 59 experiments can be performed in an hour each. For the most part the experiments are new, and require only simple apparatus. Questions and blank tables are included with each experiment. The pages of the manual are detachable.—H. Schlossberg (Brown).

3953. Dashiell, J. F. *Fundamentals of general psychology*. Boston: Houghton, Mifflin, 1937. Pp. xxiv + 656. \$3.00.—A revision and enlargement of the author's *Fundamentals of Objective Psychology* published in 1928. The book attempts to give a comprehensive survey of the entire field of psychology, recognizing the necessity for orienting the discussion about human problems. Less space than in the previous volume is given to the anatomical details of the nervous system and more is devoted to such subjects as the psychology of adjustment, work and efficiency, and abnormal psychology. Developments in Gestalt psychology, organismic views, the importance of the role of maturation in development are some of the more recent topics which are considered. Pedagogically the volume attempts to strike a mean between a "science-centric" and a "student-centric" presentation. Numerous illustrations and bibliographies for each chapter are provided.—D. Shakow (Worcester State Hospital).

3954. Dockeray, F. C. *General psychology, briefer course*. New York: Prentice-Hall, 1937. Pp. xviii + 372. \$2.50.—The previous edition of *General Psychology* has been shortened to meet the needs of a one-quarter course for beginning students. To make such a rapid survey possible the more physiological aspects are omitted and only the most important problems of adjustment and learning are touched. The purpose is "to emphasize the distinction between description and inference." The systematic plan may be inferred from the amount of space devoted to individual topics. Stimulus and response, motivation, attention, emotion, and learning are each allotted about 40 pages. Thinking, including the use of intelligence tests, has 60, and social behavior and personality 80 each. Each chapter includes questions for review and references.—M. P. Montgomery (Faribault, Minn.).

3955. Furfey, P. H., & Daly, J. F. *A criticism of factor analysis as a technique of social research*.

Amer. sociol. Rev., 1937, 2, 178-186.—Factor analysis presupposes two preliminary steps: (1) making quantitative measurements of the phenomena, (2) applying the correlation technique. The first step is criticized on the grounds of lack of constancy of "traits," and of its irreversibility (i.e., although a certain set of answers on an attitude test specifies a unique point on the quantitative continuum, the reverse does not hold). The utility of the correlation technique is also criticized on the grounds of irreversibility (i.e., an infinite number of possible bivariate distributions may determine the same r). Factor analysis merely adds to these inadequacies and cannot give a useful picture of the original phenomena. This article is followed by an anonymous criticism in defense of factor analysis, and a rejoinder by Furfey.—I. L. Child (Yale).

3956. Garrett, H. E. *Statistics in psychology and education*. (2nd ed.) New York: Longmans, Green, 1937. Pp. 493. \$3.50.—This edition is 176 pages longer than the former one. "The treatment of percentiles, of comparable scores, of reliability and validity of tests has been expanded; and new material has been added to the chapters dealing with the normal probability curve, sampling and reliability of measures, and correlational methods. Breaking down the chapters of the old book into smaller and more comprehensible units should improve the teachability of the new book." The various chapters are concluded with problems for the student (plus answers), and at the close of the volume numerous reference tables are to be found.—W. S. Hunter (Brown).

3957. Gibson, W. C. *Santiago Ramon y Cajal*. *Ann. med. Hist.*, 1936, 8, 385-394.—Biography.—D. J. Ingle (Mayo Foundation).

3958. Gini, C. *Dell' influenza che il raggruppamento delle singole modalità esercita sul valore di alcuni indici statistici nel caso di serie sconnesse*. (On the influence which grouping of a single modality exercises upon the value of some statistical indices in the case of a discrete series.) *Metron*, 1936, 12, No. 4, 3-34.—R. R. Willoughby (Brown).

3959. Heyer, G. R. *Der Organismus der Seele*. (The organism of the mind.) (2nd ed.) München, Berlin: J. F. Lehmanns Verl., 1937. Pp. 152. M. 4.80.—R. R. Willoughby (Brown).

3960. Houston, W. V. *The philosophy of physics*. *Science*, 1937, 85, 413-419.—The author proposes "to describe not so much any one unified philosophy of physics as a series of results of physics which I believe may have some bearing on philosophical problems." He considers the problems of the nature of existence, causality, and the structure of matter, and in the course of his discussion discusses the facts

of sensation, dualism, the principle of indeterminism, and the mechanistic interpretation of the universe. The article closes with a consideration of positivism as the more or less "official philosophy of physics today."—*F. A. Mote, Jr.* (Brown).

3961. **Husson, R.** *L'analyse statistique des aptitudes et des fonctions mentales.* (Statistical analysis of aptitudes and mental functions.) *Bull. Statist. gén. Fr.*, 1936, 25, 1-27.—The author discusses the uses to which statistics have been put in attempts to solve speculative and abstract problems in the field of general psychology. He takes up the relations between two aptitudes, the reduction of aptitudes to a minimum number, and the explanation of relationships between aptitudes.—*M. H. Piéron* (Sorbonne).

3962. **Koeppler, H.** *Das Wahrscheinlichkeitsgesetz zweier wahrer einander zugeordneten Fehler und einige mit diesem zusammenhängende Betrachtungen.* (The law of probability of two true errors correlated with each other and some observations dependent upon this.) *Metron*, 1936, 12, No. 4, 35-66.—*R. R. Willoughby* (Brown).

3963. **Lahy, J. M.** *Sur l'emploi des appareils de mesure des temps de réaction en psychotechnique.* (The use of apparatus to measure reaction times in industrial psychology.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 134-139.—A description of certain modifications of the Arsonval chronoscope, perfected by the author.—*H. Beaumont* (Kentucky).

3964. **Lenzen, V. F.** *Philosophy of physics.* *Science*, 1937, 85, 583.—The author is restating a theory of the relation between perception and the physical world which provides an adequate basis for science but does not commit one to a specific philosophy. "A perception which belongs to a correlated set of actual and possible perceptions is interpreted to be a perception of some physical body. A theory of physical bodies may now be expressed by two principles. The first principle is that a physical body is a center of reference of correlated perceptions. . . . The second principle is that the structure of perceptions indicates the structure of bodies." The neutrality of this formulation with respect to any philosophy is indicated by giving two philosophical interpretations, dualism and phenomenalism.—*F. A. Mote, Jr.* (Brown).

3965. **Linder, F. E., & Leary, M. V.** *A method facilitating the application of the χ^2 test to certain problems arising in social psychology.* *J. soc. Psychol.*, 1936, 7, 363-368.—A simplified method of applying the chi-square test to sets of contingency results where the simultaneous application involves the use of identical constants.—*E. B. Newman* (Swarthmore).

3966. **McCall, A. B.** *You yourself; an introduction to general psychology.* Garrison-on-Hudson, New York: Treasure Tower Publ. Co., 1937. \$1.35. Pp. viii + 213.—This book is divided into 3 parts, some of the chapter headings of which are: riches that belong to you, kinds of self defense—and your own, psychological value of sympathy—its value

to you, the conscious wish—and your own wishes, etc. A companion to the book is *Helps to the Study of General Psychology*, comprising 23 pages for the use of individuals, clubs, and classes.—*F. A. Mote, Jr.* (Brown).

3967. **McDougall, W.** *Aufbaukräfte der Seele.* (Constructive powers of the mind.) Leipzig: Thieme, 1937. Pp. 282. RM. 7.20.—Translation of *The Energies of Men.*—*R. R. Willoughby* (Brown).

3968. **Miller, J. L.** *Burton's "Anatomy of Melancholy."* *Ann. med. Hist.*, 1936, 8, 14-53.—Discussion of the life of Robert Burton and the content of his book on melancholy, which was published in 1621.—*D. J. Ingle* (Mayo Foundation).

3969. **Nojima, C.** *Shinrigaku hattatsushi.* (History of psychology.) Tokyo: Daito Shobo, 1937. Pp. 297.—Primordial forms of psychology and its several phases of development in occidental and oriental countries, the rise of modern empirical psychology, the establishment of scientific or measurement tendencies, the standpoints of James, Bergson, Dilthey and Spranger, Würzburg and Austrian schools, wholeness view of consciousness—all these chapters are followed by the history of the development of the science in Japan and its several fields at the present day, comprising animal, child, adolescent, educational, abnormal, social, vocational, individual, racial, and typological psychologies. A bibliographical chronological table is appended at the end of the volume.—*R. Kuroda* (Keijo).

3970. **Qual, A.** *Wiarogodność metody introspekcyjnej w świetle eksperymentów.* (Reliability of the introspective method in the light of experiments.) *Psychotechnika*, 1936, 10, 168-176.—The author measured the reaction times of 6 persons, observing how variations in this period depended on different psychical conditions. At the same time he asked the persons investigated for their introspective reports, and in this way was able to prove that introspection is reliable and may be corroborated.—*S. Blachowski* (Poznań).

3971. **Ray, B.** *Consciousness in neo-realism.* London: Humphrey Milford, 1935. Pp. 153. \$3.00.—(Not seen).

3972. [Various]. *Arbeiten aus dem Psychologischen Institut der Universität München.* (Researches from the Psychological Institute of the University of Munich.) Bd 7. München: 1936.—*R. R. Willoughby* (Brown).

3973. **Wojciechowski, J.** *Historia pierwszego dziesięciolecia Polskiego Towarzystwa Psychotechnicznego.* (History of the first ten years of the Polish Psychotechnical Society.) *Psychotechnika*, 1936, 10, 197-220.—This society, founded in March 1926, has grouped together the majority of Polish psychotechnicians. It possesses 37 branches, scattered throughout the country, and publishes the periodical *Psychotechnika*.—*S. Blachowski* (Poznań).

3974. **Woodbridge, F. J. E.** *Nature and mind.* New York: Columbia Univ. Press, 1937. Pp. 519. \$3.75.—This book is a selection of essays by the

author presented to him on the occasion of his seventieth birthday. It is divided into the following parts: confessions, metaphysics and logic, consciousness and cognition, and addresses. A bibliography of his writings is included.—*F. A. Mote, Jr. (Brown).*

[See also abstracts 4044, 4183, 4367.]

NERVOUS SYSTEM

3975. Bacq, Z. M. *La transmission chimique des influx dans le système nerveux autonome.* (The chemical transmission of impulses in the autonomic system.) *Ergebn. Physiol.*, 1935, 37, 82-185.—Evidence is presented substantiating the chemical theories of neural excitation in the autonomic nervous system. There are two chemical mediators, acetylcholine, liberated by the 'cholinergic' nerves, and adrenaline, liberated by the 'adrenergic' nerves.—*G. F. J. Lehner (Brown).*

3976. Bremer, F. *Action de la strychnine en application locale sur l'activité électrique du cortex cérébral.* (Action of local applications of strychnine on the electric activity of the cerebral cortex.) *C. R. Soc. Biol., Paris*, 1936, 123, 90-95.—Local applications of strychnine (at a dilution of 1 to 1000) had exciting or paralyzing effects on the natural electric activity of the cerebral cortex, the effect depending upon the concentration attained by the alkaloid when in contact with the nerve cells. All the effects from injecting the strychnine in the cortex were localized at the point of injection and were entirely reversible.—*M. H. Piéron (Sorbonne).*

3977. Bremer, F., & Thomas, J. *Action de l'anoxémie, de l'hypercapnie et de l'acapnie sur l'activité électrique du cortex cérébral.* (The effect of anoxemia, hypercapnia and acapnia upon the electrical activity of the cerebral cortex.) *C. R. Soc. Biol., Paris*, 1936, 123, 1256-1261.—In their study of the direct influence of variations of the composition of alveolar air on the spontaneous electric activity of the cerebral cortex, using an isolated brain preparation, the authors have shown that the activity is extremely sensitive to anoxemia, slightly sensitive to hypercapnia and unaffected by the breathing of pure oxygen or by acapnia when the latter does not produce a fall in arterial pressure.—*M. H. Piéron (Sorbonne).*

3978. Bushmakina, N. *The brain of the Jakuts.* *Amer. J. phys. Anthropol.*, 1936, 21, 29-37.—Anatomical description. The comparative analysis of the characteristic features of the brain of two nationalistic groups can indicate to some extent their racial proximity or distance.—*D. J. Ingle (Mayo Foundation).*

3979. Crowell, P. S., Jr. *Factors affecting regeneration in the earthworm.* *J. exp. Zool.*, 1937, 76, 1-34.—When the nerve cord is associated with a wound region in the anterior part of the body, it induces regeneration. If the nerve cord is lacking, there is still at times autogenous formation of a new brain.—*L. Carmichael (Rochester).*

3980. Culler, E. A. *Views of a decorticate dog.* (Film.) Chicago: Stoelting, 1934. 207 feet, 16 mm. \$18.70.—This film shows the behavior of a totally decorticated specimen. Included are views of the animal's posture, mode of locomotion, dilated pupils, resistance to impressed movements, and rage with slight provocation. A demonstration of subcortical conditioning to a loud tone is given.—*L. F. Beck (Oregon).*

3981. Dejean, R., & Bourguignon, G. *Variations de la chronaxie vestibulaire dans l'hémiplégie avec ou sans aphasie.* (Variations in vestibular chronaxy in hemiplegia with or without aphasia.) *C. R. Acad. Sci., Paris*, 1936, 203, 500-502.—The authors studied the influence of cerebral lesions in aphasia on vestibular chronaxy in relation to cerebral functioning. 13 subjects were used. Results showed that central lesions in hemiplegia modified the vestibular chronaxies, as in all other disorders in cerebral functioning. This effect was shown on both sides, thus demonstrating the connection of each labyrinth with the centers on each side. The action of the central lesions differed according to the presence or absence of aphasia. When no aphasia was present the variation was alike on both sides, but when aphasia was present the variation was more marked and a predominance of activity was apparent in the left hemisphere.—*M. H. Piéron (Sorbonne).*

3982. Drabovitch, W., & Weger, P. *Deux cas de névrose expérimentale chez le chien.* (Two cases of experimental neurosis in the dog.) *C. R. Acad. Sci., Paris*, 1937, 204, 902-905.—Pavlov has often produced neuroses in dogs. The essential condition for obtaining these experimental neuroses is the production of a painful or difficult clash between contrary processes, such as excitation and inhibition, or the requiring of a differentiation between figures on a screen which are too much alike. The authors describe two cases of neurosis, one of which corresponds with the conditions as described by Pavlov, but the other of which differs from his findings, viz., the dog remained in a state of rest for a month.—*M. H. Piéron (Sorbonne).*

3983. Dusser de Barenne, J. G., McCulloch, W. S., & Nims, L. F. *Changes of hydrogen ion concentration of the cerebral cortex.* *Proc. Soc. exp. Biol., N. Y.*, 1937, 36, 462-465.—A glass electrode of the McInness type was used in conjunction with the microvoltmeter (described by Burr, Lane, and Nims) to measure pH of cerebral cortex *in vivo*. Differences in potential between the glass electrode and Ag-AgCl saline-wick electrodes 2 mm. apart were observed and correlated with pH by standardization in buffers of known pH. Curarized animals under constant ventilation showed constant pH on the cortex. Increased ventilation caused a shift toward alkaline; a decrease in ventilation, a shift toward acid. Sodium bicarbonate injections produce a shift toward alkaline, HCl toward acid. Thermocoagulation renders an area acid.—*H. Peak (Randolph-Macon).*

3984. **Elsberg, C. A.** The localization of supratentorial tumors of the brain by olfactory tests. *Ann. intern. Med.*, 1936, 10, 49-57.—Study of the sense of smell by the blast injection and by the stream injection of odors is found to be of value for the localization of supratentorial tumors of the brain. In subfrontal extracerebral growths the threshold for odors is increased on one or both sides, while the duration of olfactory fatigue is not prolonged. If the tumor lies within the substance of one cerebral hemisphere the threshold may be normal or lower than normal, but there is definite prolongation of homolateral fatigue. In frontal lobe tumors the threshold is raised and olfactory fatigue is prolonged on the side on which the tumor is located. Increased irritability of the olfactory pathways is frequently associated with increased intracranial pressure.—*D. J. Ingle* (Mayo Foundation).

3985. **Fischer, O., & Imhofer, R.** Über einen Fall von reiner zerebraler Störung der Singstimme. (A case of purely cerebral disturbance of the singing voice.) *Med. Klinik*, 1935, No. 51, 9.—*P. L. Krieger* (Leipzig).

3986. **Hoff, H. E.** Vagal stimulation before the Webers. *Ann. med. Hist.*, 1936, 8, 138-144.—In 1846 a note was published by Eduard Weber and his brother Ernst Heinrich Weber reporting that galvanic stimulation of the vagus nerves has an inhibitory action on the heart beat. The author reviews studies which had demonstrated slowing and even complete cardiac arrest, block, and vagal escape nearly two centuries prior to the publication by the Webers.—*D. J. Ingle* (Mayo Foundation).

3987. **Johannes, T.** Über die Chronaxie bei Störungen im Säurebasenhaushalt des Körpers. (Chronaxy in disturbances of the acid-base equilibrium of the body.) *Z. klin. Med.*, 1934, 130, H. 1, 2-6; 131, H. 4/5, 25-27; 235-246; 760-767; 599-604.—*R. R. Willoughby* (Brown).

3988. **Jüdel, E.** Über Gehirnverletzungen an Ratten. (On brain injury in rats.) *Arch. nêr. Physiol.*, 1936, 21, 476-495.—The effects of brain injuries on learning and retention of a simple brightness discrimination habit by nine albino and two piebald rats were studied. An apparatus resembling the Marquis modification of the Yerkes-Watson brightness apparatus was used. For the most part injuries involved the area striata, but in some cases parts of the motor and somesthetic areas as well were destroyed. Little disturbance of the visual habit resulted from mere cortical injuries. When, however, subcortical injuries of the deeper nuclei were present the visual habit was always disturbed, and additional training was required to reinstate the habit. The results confirm conclusions by others to the effect that subcortical mechanisms (particularly the anterior quadrigeminal bodies and the posterior portions of the thalamus) mediate the simple light discrimination habit.—*C. P. Stone* (Stanford).

3989. **Popov, N. F., & Michaelova, E. M.** [The vegetative nervous system in the work of the skeletal musculature.] *Ark. biol. Nauk*, 1935,

40, 214 ff.—The sympathetic nervous system is considered to play a stimulating and the parasympathetic system an inhibitory role in the regulation of muscle tissue processes.—(Courtesy *Child Developm. Abstr.*)

3990. **Schriever, H.** Die Summation nervöser Erregungen. (The summation of neural excitation.) *Ergeb. Physiol.*, 1936, 38, 877-939.—The author undertakes a systematic review and investigation of the phenomena of summation. He discusses the laws of Lâpicque, local sensory-apparatus summation, peripheral summation, central summation, summation and inhibition, and the application of the general laws of summation to normal rhythmic neural discharges. An extensive bibliography is given.—*G. F. J. Lehner* (Brown).

3991. **Scullica, F.** Funzione visiva e glicidi dei lobi occipitali del ratto. (Visual function and amount of carbohydrates in the occipital lobes of rats.) *Ann. Ottal. Clin. ocul.*, 1936, 64, 50-58.—The author tested the total amount of carbohydrates in the occipital lobes of rats by the Dische-Popper method. In 6 normal adult rats (12 to 14 months old) he found on an average 213 mg%; in 6 corresponding rats, 5 days after blinding with a red-hot iron, on an average 265 to 275 mg%. Four normal young rats (5 months old) showed an average content of 224 to 235 mg%, whereas in corresponding young rats blinded 122 days previously only an amount of 146 to 151 mg% of carbohydrates could be detected in the occipital lobes. These data furnish, according to the author, an indirect proof of the importance of retinal excitations for the metabolism of the carbohydrates of the brain and, therefore, of the role of this metabolism in the activity of the cortical elements of the sensorial visual zone.—*H. Burian* (Dartmouth).

[See also abstracts 3997, 3998, 4001, 4019, 4106, 4168.]

RECEPTIVE AND PERCEPTUAL PROCESSES

3992. **Ader, H.** Ein neues Hörphänomen. (A new acoustic phenomenon.) *Mscr. Ohrenheilk.*, 1935, No. 5, 7.—A sound-screening body was placed between the head and the source of the sound (the so-called sound-frequency plates). The results of the experiments showed that acoustic screening of even a small part of the skull changed the character of the sound through the disappearance of the higher partial tones. By nonmusical persons, and in the case of a lack of higher partial tones in the source of sound, this phenomenon was usually experienced as an increase in the depth of the sound. This phenomenon can also be demonstrated by other methods, both physiological and purely objective. The skull has a lesser conduction capacity for higher frequencies. Air-bone conduction appears to play a role, under certain conditions, in auditory orientation in space.—*P. L. Krieger* (Leipzig).

3993. Akhmatov, A. Monokulyarnoe zreni i ego znachenie dlya fizicheskikh metodov issledovaniya. 1. Issledovanie monokulyarnogo poroga svetooschushcheniya. (Monocular vision and its significance in physical methods of research. 1. Study of the monocular threshold of light perception.) *Arkhh. biol. Nauk*, 1935, 39, 685-699.—(With English summary.)—(*Biol. Abstr.* XI: 8509).

3994. Bergh, E. Några erfarenheter om det dövstumma, icke undervisade barnet. (Some experiences concerning the deaf-mute who has been given no instruction.) *Svenska Läkartidn.*, 1937, 34, 499-507.—This lecture, which was given to the Medical Society of Malmö, Sweden, is an attempt at a description and explanation of the mental and social life and outlook of deaf-mute children, based upon long experiences with them and conferences with parents. The period especially depicted is the one from the first year of life (in which practically no differences were noticed as compared to normal children) to the age of eight or nine years of life, when the child enters a school for the deaf and dumb. No bibliography.—*M. L. Reymer* (Mooseheart Laboratory for Child Research).

3995. Bouman, H. D. Über den Weberschen Versuch zur Differentialdiagnose von Mittelohr- und Innenohrkrankheiten. (On the Weber experiment for differential diagnosis of middle and inner ear disorders.) *Arch. néerl. Physiol.*, 1936, 21, 517-525.—If a tone source is put against the forehead of an experimental subject with a defect of the resonance apparatus of one ear, the tone is perceived as louder by the defective ear. This phenomenon depends greatly upon the damping effect of room noises upon the normal ear. The author has worked out a method for measuring the subjective intensity difference between the two ears. With this method it has been demonstrated that in a sound-proof room this phenomenon entirely disappears, but that it reappears if a noise is introduced into the sound-proof room. Under the latter conditions the amount of the difference grows with the strength of the noise introduced.—*C. P. Stone* (Stanford).

3996. Bourdon, B. Sur une expérience de transparence. (On an experience of transparency.) *J. Psychol. norm. path.*, 1936, 33, 712-717.—The author discusses a demonstration in the study of perception where one surface is viewed through another more extended one, the purpose of which is to show the relationship which exists between color and the organization of space.—*R. E. Perl* (New York City).

3997. Bourguignon, G., & Monnier, M. Les variations de la chronaxie sous l'influence des éclairages colorés dans le torticollis spasmodique. (Variations in chronaxy under the influence of colored lights in spasmodic torticollis.) *C. R. Acad. Sci., Paris*, 1936, 203, 347-350.—Green light has a calming effect, while red acts as an irritant. The intensity of the spasm varies according to the variation in ratio between the largest and the smallest chronaxy, and the colored lights seem to affect

this relationship rather than the absolute value of the chronaxy considered separately for each side. This effect on the peripheral chronaxy caused by the intermediation of the optical centers can be explained only by a reflex repercussion of the optical centers on the motor centers, which in turn affect the peripheral chronaxy. These experiments demonstrate the central origin of so-called mental spasmodic torticollis and offer an example of the effect of brain centers on chronaxy.—*M. H. Piéron* (Sorbonne).

3998. Brun, R. Troubles de l'odorat et du goût comme signe d'une lésion focale du lobe temporal. (Disorders of the senses of smell and taste as a sign of a focal lesion of the temporal lobe.) *J. belge Neurol. Psychiat.*, 1937, 37, 262-269.—The author briefly gives two case histories. One patient, a man of 33, suddenly developed epileptiform attacks which were preceded by a peculiar taste sensation. Diagnosis of a cerebral tumor in the right temporal lobe was made. The patient died after a severe attack, but as permission for autopsy was denied the diagnosis could not be verified. The second patient, a woman of 52, had dizzy spells accompanied by a disagreeable sensation of the odor of sulphur, which seemed to come from the right side. Symptoms of depersonalization developed and later a spastic paresis appeared together with reflex disturbances indicative of a tumor of the base of the right temporal lobe. The diagnosis was confirmed by autopsy. The author discusses these cases in comparison with others reported in the literature. In conclusion he states that paresthesia, hallucinations and illusions of smell and taste in the early stages of the disease are a definite topographic symptom of an affection (irritation) in the tertiary cortical centers of these senses at the medial base of the temporal lobe. Occurring in the early stages of a cerebral tumor they serve as a certain means of localization of the tumor in that region. On the other hand, simple anosmia and hyposmia have nothing to do with an affection of the tertiary cortical centers of olfaction and gustation and therefore are of no diagnostic value for the localization of a tumor. A bibliography is given.—*H. Sze* (Cornell).

3999. Buddenbrock, W. v. Eine neue Methode zur Erforschung des Formensehens der Insekten. (A new method of investigation of form discrimination in insects.) *Naturwissenschaften*, 1935, 23, 98-100.—When a fly is placed in a passage one wall of which is uniform (either black or white) and the other striped, it goes toward the striped wall and is more attracted to accentuated stripes, such as white and black, than to white and gray. There is a *Prägnanz* of forms analogous to that which Hertz studied in bees. The preference for horizontal stripes is definite, but alight in some cases. With a fixed distance of 100 mm. there is a maximum attraction for stripes 20 mm. wide; stripes of 3 mm., with an angular diameter of 8°, are less effective.—(Courtesy *Année psychol.*)

4000. Buddenbrock, W. v. *Versuche über die Wahrnehmungsgrenze des Insektenauges.* (Studies on the perceptive limits of the eyes of insects.) *Naturwissenschaften*, 1935, 23, 154-157.—The author gives the results of investigations by the optokinetic reaction method at 3 different brightnesses (.6 lux, 13.8 lux, 200 lux) on 4 species of insect: *Coccinella septempunctata*, *Apis mellifica*, *Pieris brassicae*, *Eristalis tenax*. The robber fly has the highest acuity, then the butterfly, the bee, and the beetle. Although the acuity increases with the illumination, it has no clear relationship to the ommatidial angle.—(Courtesy *Année psychol.*)

4001. Canella, M. F. *Les problèmes du chiasma et de la vision binoculaire. Quelques recherches sur la vision monoculaire.* (The problems of the chiasma and of binocular vision. Some researches on monocular vision.) *J. Psychol. norm. path.*, 1936, 33, 696-712.—Our knowledge of the true role of the crossing of the optic nerves, as well as of the psychophysiology of binocular vision, despite the hypotheses and neuro-geometric diagrams found in scientific publications, is altogether vague and contradictory. The author's work with fish, amphibians, reptiles and mammals is discussed. The main content of the work is a comparison of animals with two eyes with those that have been blinded in one eye. The conclusions are that the blinding causes a reduction of the visual field, a reduction the effects of which are less appreciable when the binocular visual field is more extended, and conversely more appreciable when the eyes are more lateral.—R. E. Perl (New York City).

4002. Caplin, D. A special report of retardation of children with impaired hearing in New York City schools. *Amer. Ann. Deaf*, 1937, 82, 234-243.—A survey of all elementary pupils in the public schools of New York City showed that 3.17% have impaired hearing in both ears. Two groups of hard-of-hearing children were compared with normal children in the same schools. The basis of comparison was that of grade retardation. The results showed that 42% of the hard-of-hearing were retarded one grade or more. One group of hard-of-hearing children, 4566 pupils, received lip-reading instruction from six months to two years. After this instruction only 5.8% of this group showed retardation of one grade or more. The author concludes that lip-reading instruction is economically worth while.—C. V. Hudgins (Clarke School).

4003. Chapelen, L. *Les musculatures à fonctionnement volontaire ou automatique. Leur rôle respectif dans le mécanisme régulateur de l'accommodation mis en activité par la lumière chez l'homme. La vision simultanément nette à distance unie à un pouvoir séparateur élevé, propriété de l'oeil humain.* (Voluntary and automatic musculatures. Their respective roles in the regulatory mechanism of accommodation activated by light in man. Simultaneously clear vision at a constant distance conjoined with a high resolving power, a property of the human eye.) Paris; Vigot, 1936.

Pp. 227.—Explanation rests on the different functioning of the central retinal section, or macula.—M. H. Piéron (Sorbonne).

4004. Chase, A. M. An accessory photosensitive substance in visual purple regeneration. *Science*, 1937, 85, 484.—In repeating some visual purple regeneration measurements it was found that samples bleached with a photoflood lamp showed greater regeneration than those bleached with an ordinary 100 watt lamp. The photoflood emits much energy in the blue, and it was suggested that there exists a blue sensitive substance whose decomposition is essential for the regeneration. If so, solutions bleached by violet and blue light should show more regeneration than solutions bleached by green, yellow, and orange. An experiment to show this is described. Whether this photosensitive substance is present in the unbleached visual purple solution or is a product of visual purple breakdown is not known.—F. A. Mote, Jr. (Brown).

4005. Denis, J. *Quelques remarques sur les sens du toucher et de la vue chez les araignées sédentaires.* (Some remarks on the senses of touch and sight in sedentary spiders.) *Bull. Soc. ent. Fr.*, 1935, 40, 260-264.—The chief characteristic of spiders, especially spinners, is their great tactile sensitivity. Without intervention of sight, the reactions are different for adjacent stimuli: when the wind blows the web, when a leaf falls upon it, or when an insect is entangled. The spider's attention is aroused by very slight vibrations. Sight intervenes only for mass movements and variations in light (as when a shadow is cast).—(Courtesy *Année psychol.*)

4006. Denzer, U. *Helligkeits- und Farbensinn bei deutschen Süßwasseregeln.* (Light reaction and color sense in German fresh-water leeches.) *Zool. Jb.*, 1935, 55, 525-562.—(*Biol. Abstr.* XI: 8497).

4007. Escher-Desrivieres, J., & Verrier, M. L. *Etude spectrophotométrique des boules colorées de la rétine de quelques oiseaux.* (A spectrophotometric study of colored globules in the retina of certain birds.) *C. R. Soc. Biol., Paris*, 1936, 121, 706-708.—The authors plotted transparency curves for the red and the yellow fields in pigeons and for the total retina in the turtle-dove.—M. H. Piéron (Sorbonne).

4008. Fischer, E. *Helmholtz's theory of hearing.* *Ann. med. Hist.*, 1936, 8, 357-358.—The resonance theory, generally called Helmholtz's theory, had been suggested by Albert von Haller in 1747. It is probable that Helmholtz did not know of Haller's suggestion.—D. J. Ingle (Mayo Foundation).

4009. Ford, A. *Illusions of movement.* (Film.) Chicago: Stoelting, 1931. 50 feet, 16 mm. \$3.35.—This short demonstrational film reproduces some of the effects of the phi phenomenon described by Wertheimer. The apparent movement is produced by black stationary bars exposed successively in suitable positions.—L. F. Beck (Oregon).

4010. Ford, A. **Perceptive errors in time judgments of behavior.** *J. exp. Psychol.*, 1937, 20, 528-552.—The object of this experiment was to expose the typical errors of the reaction method of making time records in such a manner that the subject's judgments, on the reaction keys, could be compared with a very accurate objective criterion. It was found that the optimum conditions for accuracy in giving time signals for the beginning and end of behavior phases include the following: (1) The illumination must exceed the critical minimum for fine line discrimination (above 10 foot candles). (2) The moving object must show visual contrast to the background by an amount above the critical discrimination limen (30 : 1, white to black). (3) The speed of the moving object on the retina should approach one minute of visual angle for 10 milliseconds of time. (4) The contours of the moving object must be as sharp as possible. (5) There must be an instantaneous criterion for the beginning and end of a behavior phase. (6) The total duration of the behavior phase must be in excess of .7 sec. (7) Time observers must be given practice until their capacities have reached approximate constancy.—H. W. Karn (Pittsburgh).

4011. Gibson, J. J. **Adaptation, after-effect, and contrast in the perception of tilted lines. II. Simultaneous contrast and the areal restriction of the after-effect.** *J. exp. Psychol.*, 1937, 20, 553-569.—The first paper of this series reported the fact that visual lines undergo what may be termed adaptation followed by a negative after-effect with respect to their direction or orientation in the frontal visual field. In many respects such adaptation behaves like sensory adaptation of the sort exhibited by color and temperature. In order to demonstrate more conclusively that linear direction is functionally akin to a sensory process like that of color, the two experiments of the present report were performed. The first demonstrated the occurrence of simultaneous contrast in this type of perception. Second, it was shown conclusively that the process of adaptation is a localized process within the visual field.—H. W. Karn (Pittsburgh).

4012. Gibson, K. S. **Colorimetry.** *Science*, 1937, 85, 545-546.—The *Handbook of Colorimetry*, which has been prepared by the staff of the color measurement laboratory, Massachusetts Institute of Technology, is here reviewed. The book covers (1) the physical basis of color specification, (2) sources of light, (3) spectrophotometry, (4) the laws of color mixture, (5) determination of tristimulus values by the weighted ordinate method, (6) determination of tristimulus values by the selected ordinate method, (7) trichromatic coefficients, (8) graphical representation of colorimetric data. The reviewer commends the *Handbook* authors for the colorimetric method used, for the book's being so designed as to allow dominant wave lengths and purities to be derived graphically instead of algebraically, and for the inclusion of other new material, such as the one-millimicron interpolations of the various func-

tions and the wave lengths of the selected ordinates. The reviewer comments, however, that there is no thorough discussion of the definition of color, there are insufficient references, psychometric methods applied to color are not considered, the distinction between reflectance and apparent reflectance is not brought out, etc.—F. A. Mote, Jr. (Brown).

4013. Graham, J. L. **Illusory trends in the observations of bar graphs.** *J. exp. Psychol.*, 1937, 20, 597-608.—In this bar graph analysis, six variables were analyzed: horizontal or vertical mode of presentation, coarseness or fineness of the scale units, spacing distance between the bars, width of bars, bar length, and nearness or remoteness from the scale. The factors compared were equated either in identical comparisons or in groups where the factors and degrees were equated (but not in identical combinations of degrees). The probability of an illusory trend holding consistently was expressed in terms of its ratio to the sigma of the difference. Results reveal that the factors which should give the maximum amount of overestimation in combination are short bars, presented with wide spacing distances, coarse scale units, and narrow bars viewed vertically if the most important comparison is a long bar, and horizontally if it is short. The bar positions remote from the scale, also, give greater overestimation.—H. W. Karn (Pittsburgh).

4014. Graham, J. L. **Illusory trends in the observations of volumes.** *J. exp. Psychol.*, 1937, 20, 609-619.—The common illusory tendencies noted in this investigation are that if a volume is considered relatively small, the tendency is to underestimate it, if large to overestimate it; that forms having relatively wider diameters are likely to be overestimated; and that with cylindrical forms having equal diameters, the taller heights are likely to be overestimated.—H. W. Karn (Pittsburgh).

4015. Haas, E. **Comparaison entre l'énergie d'une radiation simple et celle d'un mélange de radiation de même aspect visuel.** (Comparison between the energy from a simple radiation and that from a mixed radiation of the same visual appearance.) *C. R. Acad. Sci., Paris*, 1936, 203, 120-122.—Experiments were made with yellow as the simple color (0.588) and a mixture of red (0.656) and green (0.546) with a common variable brightness. The energy yielded in the two cases was not the same, that of the mixture being, on the average, more than twice as great as for the simple yellow.—M. H. Piéron (Sorbonne).

4016. Hartmann, H. **Die obere Hörgrenze bei Sauerstoffmangel.** (The upper limits of hearing in anoxemia.) *Luftfahrtmedizin*, 1936, 1, 192-202.—The upper limit of hearing by bone conduction was tested in 35 experiments in the low-pressure chamber. The level declined continuously—an example of the progressive reduction of sensory functions through anoxemia. Hartmann discusses the relationships between this decline and the appearance of severe symptoms of air sickness, as well as the attainment

of the absolute limit of hearing.—P. L. Krieger (Leipzig).

4017. Hecht, S., Chase, A. M., & Schlaer, S. The diffusion coefficient and molecular size of visual purple. *Science*, 1937, 85, 567-568.—By the use of a porous glass diffusion plate the authors have determined the diffusion rate of visual purple molecules and have found the coefficient to be probably around 0.0190 sq. cm./day. By the use of an equation of Einstein's the radius of the molecule is computed to be 6.36×10^{-7} cm. This indicates that the molecule is large, and this fact combined with other findings causes the authors to place the molecule of visual purple among the carotenoid proteins.—F. A. Mole, Jr. (Brown).

4018. Jeghers, H. Night blindness as a criterion of vitamin A deficiency. *Ann. intern. Med.*, 1937, 10, 1304-1334.—Night blindness is the earliest and most constant manifestation of vitamin A deficiency in adults. In a study of 274 subjects by means of a visual photometer it was found that mild degrees of vitamin A deficiency are common among many supposed healthy adults.—D. J. Ingle (Mayo Foundation).

4019. Jolly, W. A. On amphibian retinal currents. *Quart. J. exp. Physiol.*, 1936, 26, 97-107.—The amphibian eye was stimulated by flashes of light 40 σ in duration from different regions of the spectrum. The electroretinogram showed that the maximum of the B component was about 6350 AU and that of C about 5360 AU.—L. Carmichael (Rochester).

4020. Kissin, P. Künstliche Tageslichtbeleuchtung als Lichtquelle vermittels der pseudoisochromatischen Tafeln von Ishihara. (Artificial daylight illumination as a source of light in examinations with Ishihara's pseudo-isochromatic tables.) *v. Graefes Arch. Ophthalm.*, 1935, 134, 38-47.—The author points out that the sensitivity of persons with defective color vision decreases when the pseudo-isochromatic tables are read by artificial light. In order to make examinations for color vision independently of daylight illumination, the author gives the formula for a solid filter, with which he was able to obtain an illumination under which 24 normal persons and 14 persons with defective color vision showed a sensitivity equal nearly to that under conditions of natural daylight.—H. Burian (Dartmouth).

4021. Kleinsteuber, W. Eine physikalisch-chemische Deutung der Temperatursinnestheorie von Hahn. (A physicochemical interpretation of the temperature-sense theory of Hahn.) *Z. Sinnesphysiol.*, 1937, 67, 97-113.—The processes in an elastic cylinder containing a certain solution agree so closely with those occurring in the thermal stimulation of a sensory nerve that the former may be taken as a model for the latter. This observation provides for the first time a physicochemical explanation which accounts for the nature of temperature sensation, adaptation, the presence

of absolute temperature limens, and the duality of the temperature sense.—G. F. J. Lehner (Brown).

4022. Klose, F. Versuche zur Bestimmung der relativen Latenzzeit von Gesichtsbildern mit der Löschriz- und Trübungsmethode und ihre Verwendung zum Zwecke der Eichung der Sichtverhältnisse des atmosphärischen Mediums. (Studies on the determination of the relative latency time of visual objects with the damped-stimulus and dimming methods, and their application to the problem of establishing visual relationships in the atmospheric medium.) Danzig: 1937. Pp. 40.—R. R. Willoughby (Brown).

4023. Lopicque, C. Image rétinienne d'un point éloigné pour différentes grandeurs de la pupille. (The retinal image of a distant point for different sizes of the pupil.) *C. R. Acad. Sci., Paris*, 1936, 202, 656-659.—Whatever the size of the pupil, the image occupies a definitely separate central part which is no larger than the disk of pure diffraction but which, for average or large pupils, is surrounded by a distinct halo. This halo is often not visible, a condition which explains why the image perceived from a point source may not have larger dimensions than those which would result from pure diffraction in the absence of any aberration.—M. H. Piéron (Sorbonne).

4024. Lopicque, C. Sur la structure optique du corps vitré. (On the optical structure of the corpus vitreum.) *C. R. Acad. Sci., Paris*, 1936, 203, 122-124.—The fibers of the vitreous body, which are entirely transparent, have a higher index than does the vitreous fluid. The relative difference in index between the fibers and the fluid may be only about 3 per 10,000 for just perceptible fibers; however, this difference should be 3 per 1000 for the majority of perceptible fibers.—M. H. Piéron (Sorbonne).

4025. Lopicque, C. Sur la coloration des images rétinienne et sur la chromatisme en général. (On coloration of retinal images and chromatism in general.) *C. R. Acad. Sci., Paris*, 1937, 204, 522-524.—The distribution of light in the retinal image from a white luminous point gives a clear central portion surrounded by a halo. The central image is strongly colored yellow for the average pupil and for pupils of 2 mm. The author is interested in a difficult problem: when we fixate a point source which is quite white but not too intense (for example, a star), we see a small figure, more or less star-shaped, small enough to correspond with the central image. This should not be seen as white, as is the case, but as a clear yellow. The explanation, according to the author, of our perceiving a white source from a yellow retinal impression surrounded by blue is to be sought in the innate functional reaction of the visual apparatus.—M. H. Piéron (Sorbonne).

4026. Le Grand, Y. Sur la vision en lumière dirigée. (On vision in directed light.) *C. R. Acad. Sci., Paris*, 1936, 202, Feb. 17.—The author describes an apparatus which can measure the visual resolving power independent of irregularities in the eye. Experiments showed the essential role played

by optical defects in the lowering of visual acuity with brightness, while the retinal resolving power was also weakened, though less rapidly.—*M. H. Piéron* (Sorbonne).

4027. Lindner, R. *Physiologische Grundlagen zum elektrischen Sprachetasten und ihre Anwendung auf den Taubstummenunterricht*. (The physiological basis of electrical "speech-touch" and its application to the teaching of deaf mutes.) *Z. Sinnesphysiol.*, 1937, 67, 114-144.—The author investigates the possibility of transmitting tactually to deaf mutes the electrical frequencies set up by the voice. He charts what might be called "tactilograms" and finds that electrical "Stromtasten" is superior to electromechanical touch in the possible range of frequencies, the differential limen for intensity differences, the fineness with which quality differences can be detected, and the greater sensitivity for high frequencies. Directions for the construction of the apparatus are given.—*G. F. J. Lehner* (Brown).

4028. Luckiesh, M., & Moss, F. K. The eyelid reflex as a criterion of ocular fatigue. *J. exp. Psychol.*, 1937, 20, 589-596.—Data are presented which indicate that the rate of blinking while performing critical visual tasks is a function of both the duration and severity of the specific visual task; and that augmentation of either of these factors increases the rate of blinking. It must be considered that the initial rate of blinking is not necessarily a measure of the relative amount of energy expended in the performance of visual tasks of different characteristics and requirements, since reflex inhibition of blinking will also be involved.—*H. W. Karn* (Pittsburgh).

4029. Mitscherlich, V. *Beitrag zur Beurteilung der Besserung schwachsichtiger kindlicher Augen durch einfache Sehübungen*. (Contribution to the estimation of improvement of weak eyes in children by means of simple visual exercises.) Königsberg: Graph. Kunstanst., 1936. Pp. 18.—*R. R. Wilkoughby* (Brown).

4030. Morsh, J. E. A comparative study of deaf and hearing students. *Amer. Ann. Deaf*, 1937, 82, 223-233.—Six different tests involving motor skills were given to groups of deaf and hearing subjects, both children and adults. The deaf subjects were superior in steadiness tests, balancing tests (except when blindfolded), and location-memory tests. Normal subjects were superior in speed of eye movements. Both groups were equally proficient in tapping and in hand-eye coordination tests.—*C. V. Hudgins* (Clarke School).

4031. Müller, H. G. *Untersuchungen über spezifische Organe niederer Sinne bei rhabdocoele Turbellarien*. (Investigations on specialized organs of the lower senses in rhabdocoele Turbellarians.) *Z. vergl. Physiol.*, 1936, 23, 253-292.—Extirpation experiments show that in turbellariid flatworms there exist two chemoreceptive modalities: one effective in controlling excited random movements at a distance from food as well as the more direct

orientation closer to the source of stimulation ("olfaction"), the second ("gustation") effective in controlling the actual handling of food. In *Phaenocora typhlops* the lateral head margins contain chemoreceptors of the first type. In *Stenostomum* the "olfactory" receptors are located in anterior ciliated pits. Food reactions from distance orientation to arrival at the source of stimulation are absent when these pits are extirpated. Differentiated anterior sensitivity to carbohydrates, acids, salts, and alkalis was demonstrated in various Turbellaria, but the proboscis lacked this sensitivity. In *Brothromesostoma* a morphologically specialized auricular field was demonstrated to contain only chemoreceptors; in addition 8 anterior specialized clumps of sense-hair cells were arousable only by water-streaming. Specimens deprived of the chemoreceptors reacted to water-current changes but not to chemicals until the removed tissue regenerated.—*T. C. Schneirla* (New York University).

4032. Munn, N. L. Tactual localization without overt localizing movements and its relation to the concept of local signs as orientation tendencies. *J. exp. Psychol.*, 1937, 20, 581-588.—"Improvement in tactual localization without overt localizing movements of a differential nature has been demonstrated. Such improvement is associated with an increased knowledge of the sensory topography of the skin. Subjects report that felt differences in stimulation at various points on the skin acquire increased spatial significance as a result of practice. An implicit knowledge of results is derived from the relative positions of the points stimulated, and this appears to form the basis of learning. These results thus lend support to Peterson's view that the spatial characteristics of tactual stimulation may be developed in the course of adaptive behavior. The data of the present experiment also indicate that such development is not dependent upon overt localizing movements. The adaptive behavior may be symbolic in nature."—*H. W. Karn* (Pittsburgh).

4033. Pannier, R., & Verrier, M. L. *Recherches sur la composition du pourpre rétinien et ses rapports avec les cellules visuelles*. (Studies on the composition of visual purple and its relationship to visual cells.) *C. R. Acad. Sci., Paris*, 1936, 202, 1614-1616.—*M. H. Piéron* (Sorbonne).

4034. Park, G. E. An investigation of the angular relation of the visual (Visierlinie) and optic (corneal) axes of the eye. *Amer. J. Ophthal.*, 1936, 19, 967-975.—The optic axis does not coincide with the visual axis. They form what the author calls the "physiological angle." This angle is measured by means of an apparatus of special construction, consisting mainly of a telescope movable along a graduated arc, through which the patient looks and tries to center three targets, located before and behind the telescope. The existence of a physiological angle is due to the fact that the cornea is not centered perfectly; also to decentration and deformation of the lens through a possible unequal action of the ciliary body, as shown by experiments with atropine and eserine. There seems to be a definite relation

between the action of the extrinsic and intrinsic muscles of the eyes for the purpose of bringing about central fixation, this relation being subject to changes with adaptation, fatigue and possibly other causes.—*H. Burian* (Dartmouth).

4035. Parker, G. H., Brown, F. A., Jr., & Odiorne, J. M. The relation of the eyes to chromatophoral activities. *Proc. Amer. Acad. Arts Sci.*, 1935, 49, 439-462.—The authors report a comparative study of a shrimp (*Palaemonetes vulgaris*), a frog (*Rana pipiens*) and two fish (*Fundulus heteroclitus* and *Ameiurus nebulosus*). When deprived of their eyes, all these animals take and keep, even in the presence of light, the color which they have in darkness. However, the two blind fish show a slight change in color when they go from the light into complete darkness.—*M. G. Willoughby* (Brown).

4036. Piéron, H. Les arcs bleus de la rétine et l'émission d'ultra violet au cours de l'activité nerveuse. (The blue arcs of the retina and the emission of ultra-violet in the course of neural activity.) *C. R. Soc. Biol., Paris*, 1937, 124, 523-524.—When the paramacular region of the retina is stimulated in darkness by a small pencil of red light of convenient but low intensity, one notes brief faint bluish luminous arcs following the elliptical path of the fibers which join the yellow spot to the optic disk. The author finds improbable those explanations which are couched in terms of electrical diffusion from fiber to fiber and those stated in terms of a fluorescence of active nerve fibers. The emission of rays observed by Audubert and Robert Lévy on the excited sciatic of a frog makes it probable that ultra-violet radiations having a wave-length of 230-240 μ are involved. Hertel found the effective limit to be 396 μ when the light had to traverse the optic media and one of 226 μ when the retina was directly illuminated. It is therefore not improbable that emissions of the order of some thousands of photons per second and per square mm. with radiations of about 240 μ may, on reaching the receptive elements, arouse a brief excitatory process. The faint chromatic impression is that given by the end of the spectrum and is always the same irrespective of the frequency of the excitation.—*M. H. Piéron* (Sorbonne).

4037. Poljak, S. Structure of the retina in primates. *Acta Ophthalm., Kbh.*, 1935, 52-60.—This is a report of a histological study of the retina of the macaque and chimpanzee. Rods are found in small numbers in the macular region, except in the foveal center, the external segments being of the same length as those of the cones. There is a unique type of horizontal cell and there are three varieties of bipolar cells. Some of these latter have dendrites of a diffused character which place them in communication with groups of cones and rods and bring them into liaison with varieties of ganglion cells having also the diffused character of dendrites. Others are limited to the macular region. These have an individual character; they are united to a cone on the one side and to a ganglion cell on the other, and conform to

the exigencies of a functional spatial localization.—*M. G. Willoughby* (Brown).

4038. Portillo, J. del. Beziehungen zwischen den Öffnungswinkeln der Ommatidien, Krümmung und Gestalt der Insektenaugen und ihrer funktionellen Aufgabe. (Relationships between the angular openings of ommatidia, curvature and form of insect eyes, and their functional tasks.) *Z. vergl. Physiol.*, 1936, 23, 100-145.—The external and internal morphology of the eye in numerous insect species was studied in relation to visual functions. Specialization is minimal in the superposition eye. The radially homogeneous organization of elements in this eye accounts for the fact that it functions as a "light-trapping" organ. In contrast, the apposition eye shows distinct local specialization, such as variegated form, different angles between ommatidial axes and corneal surfaces, asymmetrical placing of ommatidia, and optical isolation of individual ommatidia. A well-differentiated distribution of function results, permitting a high resolving power which is directionally differentiated. A contrast study of optic ganglia in the two types of eye shows corresponding results: the ganglia are weakly developed in insects with superposition eyes, large and well-developed in insects with the apposition eye. A series of transition-form insect eyes is described.—*T. C. Schneirla* (New York University).

4039. Prister, —. Una trappola per simulatori. (A trap for malingerers.) *Boll. Oculist.*, July, 1936.—In this test colored letters on a black ground are illuminated momentarily and shown to the examinee, who is wearing red and green glasses. Since the image is illuminated only momentarily but persists for half a second, the man cannot tell by winking which eye receives the image. In a number of trials he is certain to make mistakes and to give himself away. The letters and their color can be changed at will by the examiner.—(Courtesy *Brit. J. Ophthalm.*).

4040. Riddoch, G. Sur quelques aspects du problème concernant le membre fantôme. (On certain aspects of the problem of phantom limbs.) *Encéphale*, 1937, 32, 25-31.—After amputation of a limb, it is a common occurrence for the patient to experience sensations that give the impression that the limb is still present. This phenomenon of the phantom member serves as a demonstration of the sensory function of projection, one of the aspects of sensation whereby we recognize without direct contact or vision the exterior extent of our body and the relations which unite its various parts. When a limb is cut off, the stimulation of the proximal segment of the cut nerves arouses sensations which are projected and consequently interpreted as though the limb were still present. It is not until a decrease in the peripheral stimuli occurs, linked with the healing of the sectioned nerve, which weakens the phenomenon of the phantom member, that the subject accepts the new form of his body. We must look into the extent of the loss of postural sensitivity for the explanation of the fact that the

phantom member, following lesions in the plexuses, in the posterior roots, or in the medulla, generally appears in a different position from that originally occupied by the real limb. The last question discussed is why certain phantoms are painful and why they persist. Modifications in the structure of the nerves in the stump have been observed in such cases. They consist in the formation of delicate sensory terminations and the presence of interstitial neuritis; primitive plexuses may even be formed.—*M. H. Piéron* (Sorbonne).

4041. Ruckmick, C. A., & Greenwald, D. U. *The phi phenomenon*. (Film.) Chicago: Stoelting, 1935. 230 feet, 16 mm.—The introductory views in this film show common perceptions of movement in everyday life; while the main portion of the film illustrates various phases of alpha, beta, gamma and delta types of apparent movement. The film includes informative titles.—*L. F. Beck* (Oregon).

4042. Scheideler, J. *Beitrag zur Differentialdiagnose der erworbenen und erblichen Taubheit*. (Contribution to the differential diagnosis of acquired and hereditary deafness.) *Arch. Ohr., Nas.- u. KehlkHeilk.*, 1937, 142, 336-341.—Although an accurate family history is indispensable for a certain diagnosis, nevertheless in the individual case bilaterally equal remnants of hearing with normal vestibular function speak with great probability for the hereditary character of the affection. In the presence of unequal remnants of hearing on the two sides, the diagnosis "hereditary deafness" is not to be dismissed summarily.—*P. L. Krieger* (Leipzig).

4043. Stefanelli, A. *Di alcuni dispositivi nervosi della sensibilità cutanea negli uccelli*. (Some neural apparatus for cutaneous sensitivity in birds.) *Riv. Biol.*, 1935, 18, 191-196.—Numerous bundles of myelinated and non-myelinated nerve fibers penetrate into the skin of birds. Some of the large myelinated fibers take chloride of gold well, and can therefore be traced to the corpuscles of Pacini; others, smaller and more difficult to color, lose their myelin at a given moment and form a diffused plexus by mingling with non-myelinated fibers. The author also describes the nerve expansions surrounding the feather follicles. Plates reproduce diverse forms of endings in the pigeon and the finch, especially corpuscles more or less completely encapsulated with their sensory cells. In the bat the cutaneous innervation is shown to be similar.—(Courtesy *Année psychol.*)

4044. Teed, R. W. *The otology of Du Verney*. *Ann. med. Hist.*, 1936, 8, 453-455.—A monograph on the ear was published by Du Verney in 1683. In addition to his discussion of the anatomy and pathology of the ear he presented a theory of hearing in which he reasoned that the immediate organ of hearing must be the cochlea. He believed that the sound impulses were conveyed to the labyrinth by the ossicular chain, and set the lamina spiralis ossea in motion. The impulses entered the cochlea through the secondary tympanic membrane, and increased

the effect of those entering through the oval window. He conceived that the lower coil of the cochlea received the lower tones, and the middle and apical coils the higher.—*D. J. Ingle* (Mayo Foundation).

4045. Vernon, M. D. *Visual perception*. New York: Macmillan; Cambridge: Univ. Press, 1937. Pp. 247 + x. \$4.50.—Visual perception is dealt with in fourteen chapters, the subject matter falling under four main headings. In the first section the author attempts to trace the development of the perceptual process from its inception to its elaboration in meaning. In this section there is a chapter on the relation of imagery to the perception of words, and the "structuralist" position is discussed in a brief account. The second section deals with the relation of perceptual content to some of the affective states, and the third with the objective structure of the perceptual field. The work of the Gestalt psychologists is considered in the latter. The fourth section considers the genetic development of perception in childhood. An account of the more important forms of tachistoscope is contained in an appendix. A bibliography of 377 articles comprises the list of references.—*C. H. Graham* (Brown).

4046. Verrier, M. L. *Recherches sur la vision des oiseaux diurnes*. (Studies on vision in diurnal birds.) *Bull. biol.*, 1936, 70, 197-231.—The retina of these birds shows that the presence of rods does not necessarily imply the presence of purple. It might be said that the rods are useless since these birds are diurnal, but this would suppose that the rods do not function. Thus, one cell out of two in the retina would not receive any stimulation, a supposition which would be difficult to support considering the very great visual acuity which these birds possess.—*M. H. Piéron* (Sorbonne).

4047. Verrier, M. L. *Pourpre et cellules visuelles de la fovéa des oiseaux nocturnes et des autres vertébrés*. (Visual purple and visual foveal cells in nocturnal birds and in other vertebrates.) *C. R. Acad. Sci., Paris*, 1936, 202, 2012-2014.—The author thinks that the various modes of sensitivity of the fovea, as compared to those of extra-foveal retinal regions, are not dependent upon the form of visual cells present or the distribution of visual purple.—*M. H. Piéron* (Sorbonne).

[See also abstracts 3984, 3988, 3991, 4086, 4107, 4142, 4306, 4333, 4413.]

LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

4048. Bierens de Haan, J. A., & Kooyman, D. *Bildung und Zerstörung von Handlungsrythmen bei einem Schweinsaffen*. (Formation and destruction of behavioral rhythms in a pig-tailed macaque.) *Arch. néerl. Zool.*, 1936, 2, 143-159.—The authors were able to train a young male macaque (*Pithecus nemestrinus*) to obtain food underneath a small box three times in succession, none the fourth time,

though it was rewarded by the experimenter if the correct response was made—not touching the box. After it had learned this "yes-yes-yes-no" rhythm, modifications of technique, such as giving no food in the first three responses or doubling the amount, resulted, in general, in two behavioral tendencies: (1) adherence to the regular, previously learned sequence, or (2) disregarding (not "counting") the non-rewarded reactions in the particular sequence. If the interval between responses (10 seconds in the sequence mentioned) was increased, the rhythmic order of the response disappeared. This is especially the case in complicated rhythms; less so in the simple. After the animal has learned a relatively complex rhythm it can readily learn a simpler one.—*G. F. J. Lehner* (Brown).

4049. Brown, W. Reorientation in a multiple-path maze. *Univ. Calif. Publ. Psychol.*, 1937, 5, 135-160.—The object of the study is to discover whether a subject who has partly learned a maze, when obliged to make new explorations because of changes in the middle of the maze pattern, will be able to traverse successfully the last part, which has not been changed. 40 blindfolded human subjects were used. It was found that when the paths within a partially learned maze are changed the changed region will be traversed by the subject with fewer errors than by a novice, and that the remaining unchanged parts of the true path will be traversed better still and almost as well as before any changes were made. Several hypotheses to account for this are considered.—*F. A. Mote, Jr.* (Brown).

4050. Culler, E. A. Motor conditioning in dogs. (Film.) Chicago: Stoelting, 1934. 189 feet, 16 mm. \$17.00.—Paw-withdrawal from a metal grid is conditioned to an auditory substitute stimulus. The quantitative aspects of the method are emphasized by showing that the sensory acuity of the animal may be measured with great precision. Applications of the method to other scientific problems are pointed out.—*L. F. Beck* (Oregon).

4051. Diven, K. Certain determinants in the conditioning of anxiety reactions. *J. Psychol.*, 1937, 3, 291-308.—Ten experiments are described which center upon an attempt to obtain experimental evidence on the chain of clinical hypotheses commonly employed in discussing the neuroses. A method of conditioning the galvanic skin response to words was combined with the Luria technique, an association test composed of rural and urban words, and the subject's report. It was attempted to get indicators working on all three levels of nervous activity, and to get both conscious and unconscious processes into the situation. The results include conditioning of the G. S. R. and displacement of the effects (emotional, autonomic and skeletal) to the critical word and to all the words in the class to which it belonged. Only 21 of 52 S's could report that the critical word was the cue for the shock. The number of words recalled is increased, and the increase is specific to the class of words to which the

critical word belonged, following deconditioning.—*J. McV. Hunt* (Brown).

4052. Ford, A. Rote learning. (Film.) Chicago: Stoelting, 1931. 51 feet, 16 mm. \$3.35.—In this film for classroom use there are (1) four sets of four nonsense syllables for an experiment on divided versus whole recitation, and (2) lists of four, six, eight, and ten syllables for experiments on the relation of length of series to the number of repetitions required for learning. The rate of presentation is governed by projection speed.—*L. F. Beck* (Oregon).

4053. Gemelli, A. Exercice et apprentissage. (Exercise and learning.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 73-100.—Learning experiments on white rats and human subjects were the basis of the author's theoretical considerations of the relationship between exercise and learning. His premises are: (1) even the simplest form of motor learning contains an ideational element; (2) mere repetition, without the intention to learn, does not suffice; (3) learning involves a coordination of elementary movements with the goal set. On the strength of experimental evidence, the following conclusions are reached: (1) recent experiments have failed to distinguish training from practice because they have neglected the qualitative aspect of the learning process; (2) exercise is not necessarily a mechanical repetition, but may also serve to organize motor and kinesthetic elements into a Gestalt; (3) simple repetition has no value for the further perfection of a complex activity, though elementary manipulations become more firmly established; (4) apprentices should be required to perform more adequately and with less effort rather than to repeat the same performance without immediate correction of their mistakes.—*H. Beaumont* (Kentucky).

4054. Guillaume, P. Le problème du "learning" d'après E. L. Thorndike. (The problem of "learning" according to E. L. Thorndike.) *J. Psychol. norm. path.*, 1936, 33, 717-728.—This is a critical review and discussion of the work of E. L. Thorndike on learning, especially his book *The Fundamentals of Learning*.—*R. E. Perl* (New York City).

4055. Harlow, H. F. Experimental analysis of the role of the original stimulus in conditioned responses in monkeys. *Psychol. Rec.*, 1937, 1, 62-68.—The effect of inactivating the original stimulus by reconditioning and negative adaptation, and the effect of functional reversal of substitute and original stimuli, were experimentally investigated with 4 monkeys as subjects. In the first situation the substitute stimulus (SS) was the sound of a bell, the original stimulus (OS) the sudden unrolling, in the direction of the animal, of a paper roll. The OS in the second situation was the impact of a small bolt fired at the animal from a toy pop-gun. The most striking result was the extreme stability of the conditioned responses; inactivation of the OS by negative adaptation and reconditioning did not destroy or weaken the response to the SS. Failure consistently to obtain experimental extinction or negative adaptation in the two situations is inter-

preted as a function of the kind of learning involved. Functional reversal of substitute and original stimuli was obtained in both situations.—E. D. Hunt (Brown).

4056. Korngold, S., & Lévy, A. *La conduite psychologique devant l'effort mental imposé*. (Psychological conduct in response to an imposed mental effort.) *C. R. 8 Conf. int. Psychotech., Prague, 1935*, 126-131.—A battery of three tests was submitted to groups of children and adults. The first two consisted of completion problems and were given in order of increasing difficulty; the third was a test of logical intelligence. Age comparisons showed that younger children were more apt to maintain a passive attitude than older children, but only because of their lower intellectual level. In groups of the same age, those of inferior intelligence were more passive. The same subjects responded actively to problems which were within their intellectual grasp and passively to those which were too difficult (a situation familiar to school teachers). Adults reacted in a similar manner, though the culturally superior group was at an advantage because of its practice in abstract reasoning. The intellectual inferiority which causes a passive response to an imposed mental task may present itself in an absolute form in subjects in the lowest deciles of their age group or in a relative form in subjects who react differently to problems of different complexity. It appears then as a defense reaction to a disproportionate effort.—H. Beaumont (Kentucky).

4057. Kroh, O. *Typische Denkformen in ihrer Beziehung zur Grundstruktur der Persönlichkeit*. (Typical thought forms in their relationship to the basic structure of the personality.) Leipzig: Barth, 1934. Pp. 233. RM. 11.60.—R. R. Willoughby (Brown).

4058. Lahey, Sister M. F. L. *Retroactive inhibition as a function of age, intelligence, and the duration of the interpolated activity*. *Cath. Univ. Amer., educ. Res. Monogr.*, 1937, 10, No. 2. Pp. 93.—This monograph reports a study of retroactive inhibition undertaken on children of varying ages and different degrees of mental ability in (1) attempting to determine how the degree of retroactive inhibition is affected by differences in the amount of time spent on the interpolated material, (2) studying the importance of age, and (3) investigating the relationship between degree of mental ability and susceptibility to retroaction. 3434 subjects were used. The learning was a list of verbs and the interpolated material was a list of nouns. "Rest" periods were of different lengths up to 17 minutes and the "rest" activity was group singing. Eight conclusions are given, among them that retroactive effect is at its maximum rate per minute during a short interval immediately following the original learning; with brightness held constant, susceptibility to retroaction decreases with increasing chronological age; etc. Bibliography of 129 titles.—F. A. Mote, Jr. (Brown).

4059. Laugier, H., & Weinberg, D. *Contribution à l'étude du progrès de l'apprentissage et de l'efficacité dans les activités alternantes*. (A contribution to the study of the progress of learning and efficiency in alternating activities.) *C. R. 8 Conf. int. Psychotech., Prague, 1935*, 147-152.—Two groups of girls, aged 14 and 15, were used in this experiment. The first group crossed out symbols in the Toulouse-Piéron test during 5 periods of 4 minutes each, the second interpolated crossing out letters in a newspaper after the third and fourth practice periods. This change of activity proved to be beneficial to the efficiency of the main task, even though the activities were closely similar. Hence it appears that the interpolated task need not be easier in order to produce improvement in learning the main task. However, the effects were immediate only, since no difference in the efficiency of the two groups was discoverable eight days later.—H. Beaumont (Kentucky).

4060. Lawson, D. E. *Scientific principles applied to the breaking of habit*. *Sch. & Soc.*, 1937, 45, 831-832.—The theory that the association of a concomitant dissatisfier with an act results in a transfer of "unpleasantness" to the total act, thus unconsciously blocking the incipient movements, was experimentally applied to the breaking of undesirable habits of chance origin and indeterminate practice. 19 students in a sociology class in the high school of the Southern Illinois Normal University were the subjects and the dissatisfiers suggested were removal and replacement of a shoe, mental multiplication of two 2-place numbers, spelling a large word backwards, etc. At the end of 30 days 6 reported complete loss of the habit and 9 encouraging progress.—M. Lee (Chicago).

4061. Luquet, G. H. *La formation des habitudes d'après P. Guillaume*. (The formation of habits according to P. Guillaume.) *J. Psychol. norm. path.*, 1936, 33, 728-741.—The author reviews critically and in detail the book on habits by P. Guillaume.—R. E. Perl (New York City).

4062. McNamara, W. J., & Miller, R. E. *Effect of benzedrine sulphate on mental work*. *Psychol. Rec.*, 1937, 1, 78-84.—The authors report a preliminary study to determine the effects of benzedrine sulphate upon mental operations, using written multiplication problems to measure the subject's efficiency. The objective evidence obtained did not indicate either an increase or a decrease in mental efficiency, even though there was a subjective feeling of stimulation.—E. D. Hunt (Brown).

4063. Oppenheimer, M., & Spiegel, E. *Static and kinetic conditioned reactions*. *Proc. Soc. exp. Biol., N. Y.*, 1937, 36, 563-564.—A study of conditioned responses is proposed in order to investigate the part played by connections of the labyrinth with the higher centers. Dogs were rotated obliquely and were shocked on the leg as they passed the horizontal plane in one direction. Respiration and leg withdrawal were recorded. Differential conditioning, anticipatory responses, external inhibition,

and extinction are reported.—*H. Peak* (Randolph-Macon).

4064. *Owen, H. F.* How to train your dog. Kansas City, Mo.: Grimes-Joyce Co., 1937. Pp. 39. \$1.50.—A dog trainer explains his methods for teaching dogs proper behavior and obedience with a minimum of effort for both dog and master.—*R. R. Willoughby* (Brown).

4065. *Palme, A.* Bewegungspsychologie beim Anlernen. (The psychology of learning motor tasks.) *C. R. 8 Conf. int. Psychotech., Prague, 1935*, 159-163.—*H. Beaumont* (Kentucky).

4066. *Rebello, S.* Pesquisa sobre a noção de tempo. (Study on the notion of time.) *Bol. Educ., Pernambuco, 1934*, 4, 134-182.—A series of 28 questions on different aspects of the notion of time was given to 8 groups of 50 children each (half boys, half girls) between the ages of 3 and 10. The percentage of correct responses was established for each group; graphs show the progression of these percentages with age. The author considers a concept as acquired at a certain age when 75% of the subjects of that age show correct responses concerning that concept. The age at which the different concepts are first acquired follows: morning and night, 4 years (boys) and 5 years (girls); one's own age, 4 (boys) and 6 (girls); early and late, 4 (boys) and 5 (girls); today, yesterday, tomorrow, 6; before and after, 5 (boys) and 4 (girls); determination of social time, 8; abstract actions of present, past and future, 10. Time divisions and relations of time and space are acquired late.—(Courtesy *Année psychol.*)

4067. *Rodnick, E. H.* Does the interval of delay of conditioned responses possess inhibitory properties? *J. exp. Psychol., 1937*, 20, 507-527.—During an experimental session of one hour a conditioned lid response was first established to a tactual-vibratory stimulus followed by a puff of air to the cornea. In a second two and one-half hour session, a delayed conditioned galvanic skin response was set up to a light reinforced after a 20-second interval by an electric shock. On certain trials the stimuli for the lid response were presented within the interval of delay. The amount of change in amplitude and latency of the lid response on these test trials as compared with the magnitude of the same response under normal conditions constituted a measure of the inhibitory characteristics of the interval of delay. Results from 20 subjects showed that the visual stimulus alone produced a mean decrement of 13% in amplitude and a mean increment of 13% in the latency of the test conditioned lid response before any reinforcement of the light by the shock. After a delayed CR had been established, the conditioned lid reaction suffered a decrement of 19% in amplitude when it occurred in the interval of delay. There was a corresponding increment of 15% in latency. Additional control experiments showed that the inhibition of the lid response was definitely a result of the associated order of visual and shock stimuli.—*H. W. Karn* (Pittsburgh).

4068. *Sarris, E. G.* Die individuellen Unterschiede bei Hunden. (Individual differences in dogs.) *Z. angew. Psychol., 1937*, 52, 257-309.—After using 6 dogs in 12 experimental situations, e.g. mazes, string-pulling, overturned boxes, box-stacking, size-differentiation, etc., the author concludes that dogs definitely show individual differences in temperament and intelligence. Temperament is defined as vitality, intelligence as the vitality director.—*G. F. J. Lehner* (Brown).

4069. *Trow, W. C.* Reasoning. (Film.) Chicago: Stoelting, 1932. 400 feet, 16 mm.—The processes involved in problem solving are portrayed by pictures of subjects working on a two-dimensional T-puzzle. The film purportedly demonstrates "trial-and-error, ideational behavior, Gestalt, and emotional responses to failure and success."—*L. F. Beck* (Oregon).

4070. *Tsao, J. C.* [An analytical study of Thorndike's psychology of learning.] *Chin. J. Psychol., 1936*, 1, 54-72.—*R. R. Willoughby* (Brown).

4071. *Wawrzyńczyk, S.* Badania nad pamięcią *Spirostomum ambiguum major*. (Investigation of the memory of *Spirostomum ambiguum major*.) *Acta Biol. exp., 1937*, 11, 57-77.—A *Spirostomum*, stimulated mechanically with 6-12 strokes per minute, responds by contractions which cease after a certain time. The course and variations in the cessation of contractions correspond to the laws of learning and forgetting for the higher animals.—*S. Blachowski* (Poznań).

4072. *Werner, H.* Process and achievement—a basic problem of education and developmental psychology. *Harv. educ. Rev., 1937*, 7, 353-368.—This is a search of supporting evidence for divergent views as to the nature of the development of mental processes, or abilities, in studies of analogous function revealed in the learning of children and in pathological cases. The ability to apprehend or classify objects and to make abstractions demonstrates, to the author's satisfaction, that learning is achieved not as a unitary function but by increasingly complex process-patterns, which are quite different at different levels. Not only achievement, but knowledge of the method or process employed by a child as well, becomes an essential for both genetic psychology and education.—*D. Bailey* (Mt. Holyoke).

[See also abstracts 3980, 3988, 4111, 4125, 4187, 4213, 4220, 4222, 4249, 4287, 4307, 4406, 4414.]

MOTOR AND GLANDULAR RESPONSES (incl. Emotion, Sleep)

4073. *Altenburger, H., & Peraita, M.* Umstimmungsvorgänge bei den Sehnenreflexen. (Processes of alteration in tendon reflexes.) *Z. ges. Neurol. Psychiat., 1936*, 156, 621-627.—The basic problem was to study the effect of one reflex upon the strength of a second reflex aroused a small fraction of a second later. Two hammers activated

electromagnetically by a Helmholtz pendulum provided the stimuli, and the action currents were measured by means of needle electrodes and string galvanometers. The results indicate that changes of excitability appear not only in the stimulated muscle itself but also in its antagonist and even in homologous and heterologous muscle groups of the contralateral extremity. The arousal of a reflex in the upper extremity may show effects in the lower extremity, and vice versa. The effect is sometimes an increase and sometimes a decrease in reflex excitability.—C. W. Fox (Rochester).

4074. Anthony, A. I., & Schaltenbrand, G. Gibt es eine Abhängigkeit der Muskelspannung von der Sauerstoffkonzentration der Atmungsluft? (Does muscle tone depend on the oxygen concentration of the inspired air?) *Luftfahrtmedizin*, 1936, 1, 218-225.—The authors' experiments furnished no evidence that changes in tone and muscular twitchings can be caused by lack of oxygen in the muscle itself. In contrast to the nervous system, muscle is largely independent of the respired oxygen.—P. L. Krieger (Leipzig).

4075. Beauchamp, R. S. A. The rate of movement of *Planaria alpina*. *J. exp. Biol.*, 1935, 12, 271-285.—In *Planaria alpina* the speed of movement and the duration of the phases of activity increase with the temperature. There is an equilibrium between the processes of excitation and of inhibition; the second process is suppressed before the first, thus facilitating motor acceleration. The external stimuli have an accelerative, kinetic influence; this is particularly true of the chemical stimuli, the receptors of which are located at the anterior cephalic border. When a crayfish (*Gammarus pulex*) is crushed in the water with a dilution of 2 liters, an accelerative effect on the locomotion of the planarians may be obtained with 1 cc. With a dilution of 100 cc. and using .3 cc., the speed passes from 3.25 to 5.8 cm. per minute, the accelerative effect being prolonged 40'. The accelerative effect of chemical stimulations disappears after removal of the anterior region of the planarians.—M. G. Willoughby (Brown).

4076. Berland, L. Deux observations sur l'orientation chez les hyménoptères. (Two cases of observations on orientation in Hymenoptera.) In Various, *Livre jubilaire de M. E. L. Bouvier*. Paris: Firmin Didot, 1936. Pp. 117-120.—It is generally believed that insects, in order to return to their nests, mainly make use of vision and landmarks which have been fixed in their memories on their outgoing trip, or else recognize certain points through specially regulated movements. The author observed two sand-wasps, predatory insects without fixed abode, which have difficulty in changing their course in rapid flight. From his observations he found that this predatory hymenopter was able to leave a given place and return by an entirely different route. Thus he concludes that the use of the topographical method seems improbable, especially since the insect had not habitually frequented this

particular spot and had left it without any topographical memory.—M. H. Piéron (Sorbonne).

4077. Berland, L. Araignées et Pompiles. (Spiders and pompilids.) *Arch. Zool. exp. gen.*, 1935, 75, 195-210.—The author gives some of his findings from an extended study of the prey of the pompilids. He describes the transfer of prey after detachment of the legs (or autotomy), the burrow with the prey hidden in it, the superficial damage with the extremity of the abdomen in rapid vibration. The prey is paralyzed by being stung about the mouth; if it is stung in the abdomen, it dies and is abandoned. The pompilids hunt mygalomorphs, spiders with 2 or 3 claws, and spiders with a cribellum.—(Courtesy *Année psychol.*)

4078. Beutler, R., & Wahl, O. Über das Honigen der Linde in Deutschland. (Concerning the nectar supply of the linden tree in Germany.) *Z. vergl. Physiol.*, 1936, 23, 301-331.—The range of nectar-foraging in bees was studied in terms of the geography of nectar-secreting linden trees in Germany. (The secretion of this tree is available throughout the day.) A questionnaire was sent to bee-keepers in representative districts, asking whether the linden tree was a good nectar source as judged from their observations of foraging visits made by bees. In general the returns were positive, although somewhat inconclusive. A follow-up involving the actual qualitative and quantitative measurement of nectar supply showed that in the south and in certain other localities where the bee-keepers had reported a scanty nectar supply, the supply actually was not much less in quantity or quality than in places for which excellent secretion was reported. The difference is perhaps attributable to the reactions of bees to other flowers.—T. C. Schneirla (New York University).

4079. Bohn, G. Intervention du facteur masse d'animaux dans les tropismes. (The intervention of the factor of mass in animal tropisms.) In Various, *Livre jubilaire de M. L. Bouvier*. Paris: Firmin Didot, 1936. Pp. 149-150.—The author discusses the role of the factor of mass in tropisms. He observed that the larvae of Chironomidae massed together on the lighted side of a crystallizing pan, but went to the opposite side when the air was disturbed. In the same water the larvae exhibited positive phototropism when they were massed together but negative phototropism when isolated from one another.—M. H. Piéron (Sorbonne).

4080. Bonnet, P. Cycle vital de *Philoeus chrysops* Poda. (Life cycle of *Philoeus chrysops* Poda.) *Arch. Zool. exp. gén.*, 1935, 75, 129-144.—This small red spider keeps itself in a web of white silk which it does not leave except to hunt or to seek the female. The Salticid hunter has very good acuity, with visual reactions up to 10 cm.; it follows the fly with its eyes only and without moving the abdomen, then draws nearer up to 3 or 4 cm. and secures the fly by secreting a thread. The approach to the female appears to be governed visually; it

involves a state of excitation and a nuptial dance preceding mating.—(Courtesy *Année psychol.*)

4081. Carpenter, C. R. An observational study of two mountain gorillas (*Gorilla beringei*). *Hum. Biol.*, 1937, 9, 175-196.—The locations of living gorillas in captivity are given. Observations over some time are recorded of Ingagi and Mbongo in the San Diego Zoological Park under the following headings: sexual activity, postures, locomotion, eating, drinking, play, grooming and care of wounds, dominance and cooperation, temperament, ability to learn, and nest building. Both gorillas were males. A bibliography of 20 references and some comparative notes are given.—O. W. Richards (Spencer Lens Company).

4082. Coermann, R. Einwirkungen von Bewegungen auf den Menschen. (The influence of motion upon people.) *Industr. Psychotech.*, 1937, 14, 41-58.—A review of the literature in this field. There are four types of motion discoverable: (1) equalized motion, including (a) straight, (b) twisting; (2) unequal motion, including (a) straight, (b) twisting; (3) swinging and vibration; (4) push or irregular pulsation. Various experiments used the subjects in one or all of three body positions, viz., standing, sitting or lying. The effect of the various types of motion on the individual parts of the body in the three body positions are summed up. The individual problems studied yielded results from which generalizations could not be made. It is suggested that a more general study be attempted. A bibliography of 28 titles is included.—J. C. G. Seidl (Manhattan College).

4083. Couteaux, R. Les mouvements péristaltiques des Lombrics et leurs conditions sensorielles. (The peristaltic movements of the earthworms and their sensory conditions.) *Bull. Soc. zool. Fr.*, 1935, 60, 119-127.—Traction on the extremity of the worm releases a peristaltic wave. A slight contact gives a muscular response; there is a shortened, complex regional reaction and a posterior lengthening. The stimulus which releases the peristalsis is the passive extension of the longitudinal muscular layer.—(Courtesy *Année psychol.*)

4084. Dorsey, J. L. Control of the tobacco habit. *Ann. intern. Med.*, 1937, 10, 628-631.—The tobacco habit must be considered a true drug addiction. The unpleasant withdrawal symptoms usually cannot be tolerated by the patient by voluntary effort. Treatment with lobeline is effective in dulling the acute symptoms of withdrawal and usually reduces the misery of tobacco deprivation to within easy limits.—D. J. Ingle (Mayo Foundation).

4085. Ford, A. The pecking instinct in chicks. (Film.) Chicago: Stoelting, 1929. 118 feet, 16 mm. \$28.00.—This short film compares normal chicks with experimental chicks that have been kept in the dark and hand-fed for 3, 7, 8, and 14 days after hatching.—L. F. Beck (Oregon).

4086. Ford, A. Stimulation of semicircular canals. (Film.) Chicago: Stoelting, 1929. 34 feet,

16 mm. \$8.35.—The general disturbance of postural reflexes and errors of past-pointing are qualitatively demonstrated with the Bárány chair.—L. F. Beck (Oregon).

4087. Ford, A. Motor aptitude. (Film.) Chicago: Stoelting, 1930. 216 feet, 16 mm. \$13.35.—The technique of administering the following simple tests of motor aptitudes is exhibited: Whipple board, slot-board, bolt assembly, matchboard, stylus tapping block, and dimension perception apparatus.—L. F. Beck (Oregon).

4088. Fritz, M. F. Diet and racial temperament. *J. soc. Psychol.*, 1936, 7, 320-335.—A review of the literature on this subject and bibliography of 64 titles. "A wholesome regard for verifiable facts" makes it "rather difficult to draw conclusions with any great degree of confidence."—E. B. Newman (Swarthmore).

4089. Haig, C. The phototropic responses of *Avena* in relation to intensity and wave-length. *Biol. Bull., Woods Hole*, 1935, 69, 305-324.—This is a detailed description of studies on the reaction time of the oat plantlet when it curves itself inward after being stimulated with light from the side. The author suggests that there is an inhibition of auxin production (growth hormone) under the stimulus of light, and that the inhibiting process descends from the tip of the plantlet down to the base on the lighted side. At the region of the base, under the influence of light there would be a decrease of cellular sensitivity to the stimulating influence of auxin coming from the tip, from which would follow decreased growth on the lighted side and a positive phototropic curvature.—M. G. Willoughby (Brown).

4090. Holst, E. v., & LeMare, D. W. Bausteine zu einer vergleichenden Physiologie der lokomotorischen Reflexe der Fische. I. Mitteilung. *Crenilabrus-Labrus, Sargus, Uranoscopus*. (Contributions to a comparative physiology of the locomotor reflexes of fishes.) *Z. vergl. Physiol.*, 1936, 23, 223-236.—A program is outlined for further study of spinal-cord reflexology in fishes. In the genera studied various types of "natural" stimuli (e.g., water currents, fin contact) were presented to all body regions and the reflex responses were studied in normal animals and in specimens with spinal-cord transections at different levels. In *Crenilabrus* and *Labrus* the different reflexes varied both in form and in ease of elicitation, in dependence upon the level of cord transection—e.g., internally aroused swimming reflexes of pectoral and dorsal fins appeared more promptly with high medullary transection than with lower transection. From a given locality, with weak stimulation an entirely different response was obtained from that with strong stimulation. In high-level transection cases lateral pressure inhibited certain reflexes, whereas in lower-level transection the same stimuli elicited these reflexes. The results also held for *Sargus*, with a few secondary differences, and for *Uranoscopus*, in which the total of reflex reactions is much smaller.—T. C. Schneirla (New York University).

4091. Horton, F. M. On the reactions of isolated parts of *Paramecium caudatum*. *J. exp. Biol.*, 1935, 1, 13-16.—After sectioning several parts of the paramecium up to removal of the posterior vacuole, the anterior region does not differ from the entire animal in its swimming movements and reaction to sulphuric acid. The same is true for the posterior region: when the cutting is done in front up to removal of the anterior vacuole, the spiral swimming movements are produced even in the absence of the oral corona ciliaris.—M. G. Willoughby (Brown).

4092. Jäcksch, W. Über die Zusammenarbeit von Auge und Hand. (Eye-hand coordination.) Köln: Borowsky, 1936. Pp. 32.—R. R. Willoughby (Brown).

4093. Kleinschmidt, A. Untersuchungen zum Einfluss der Kohlensäure auf Blutdruck und Kreislaufreflexe in verschiedenen Höhen. (Studies on the influence of carbon dioxide on blood pressure and circulatory reflexes at various altitudes.) *Luftfahrtmedizin*, 1936, 1, 203-217.—The hypertensive action of the carbon dioxide mixture depends, aside from the CO₂ tension, on the irritability of the nerve centers, which is increased by anoxemia. The hypertensive effect appears 20 sec. after the subject begins to breathe the CO₂ mixture, and the blood pressure reaches a maximum after 2½ min. The most suitable CO₂ concentration is about 7%. On the assumption that the carotid sinus causes a reflex regulation of the accelerative action, the question was investigated whether this occurred also under the changes in irritability produced by the CO₂ mixture. In the majority of cases the rise in carotid pressure was greater under CO₂ than in the control experiments. The effect of "voluntary hypertension" (abdominal pressure with open glottis) is also greater under CO₂ mixtures. The practical use of CO₂ for prophylaxis of acceleration effects appears defensible.—P. L. Krieger (Leipzig).

4094. Korngold, S. Contribution à l'étude de la dextralité. (A contribution to the study of dextrality.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 115-125.—A group of children between the ages of 11 and 15 and two groups of adults, divided according to cultural status, were used in an experiment consisting of putting dots in the center of small squares. Each of these squares measured 5 mm. in either dimension. They were arranged in groups of 300 to form a rectangle. The subjects performed on the first and third rectangles with the right hand, on the second and fourth with the left. The time limit in each case was one minute and the subjects were instructed to work as rapidly as possible. The data obtained were: number of dots for the right and left hands separately; mean number for both hands; half the difference between the scores for either hand as an index of dextrality. The conclusions are: (1) right-handedness increases with age, younger children being more ambidextrous than the older ones; (2) habitual use of the right hand develops its skill considerably, even in very simple activities; (3)

exercise of the right hand seems to influence the skill of the left hand considerably; (4) slow-moving subjects tend to be more ambidextrous, regardless of age and social status.—H. Beaumont (Kentucky).

4095. Laubry, C., & Brosse, T. Documents recueillis aux Indes sur les "Yoguis" par l'enregistrement simultané du pouls, de la respiration et de l'électrocardiogramme. (Data gathered in India on the Yogi from simultaneous registration of the pulse, respiration, and electrocardiogram.) *Pr. méd.*, 1936, 44, 1601-1604.—The author gathered data in India on the Yogi through a simultaneous registration of the pulse, respiration, and electrocardiogram, 41 subjects being used. His results showed (1) voluntary modification of rhythm and intensity in respiration (complete apnea either with full or empty lungs); (2) intense muscular tension; and (3) the phenomenon of mental concentration consisting of three stages: (a) concentration with effort on the chosen object; (b) pleasant, easy contemplation of the object; and (c) suppression of duality and identification of the self and the object. The author believes that there exists a human physiology which is different from simple animal physiology, that both the will and the psychism as a whole, intellectual and well as emotional, take part in this physiology, and that this influence, whether good or bad, depends upon a conscious autonomy.—M. H. Piéron (Sorbonne).

4096. Leaman, W. G. The history of electrocardiography. *Ann. med. Hist.*, 1936, 8, 113-117.—Electrocardiography is based upon the fact that the contraction of a muscle is accompanied by a current of action; therefore the history of this subject has its beginning with the earliest experiments on electrophysiology. When Galvani, in 1791, accidentally placed a dissected frog near an electric machine he observed muscular contractions. Later he discovered that when a frog lay on a metal plate and a hook piercing the spinal cord contacted the plate, a twitching occurred. In 1842 Matteucci demonstrated that a frog could be stimulated by the current of action generated by the contracting muscle of a second frog. Killiker, in 1856, discovered the action current generated by the heart beat, and in 1878 Sanderson and Page measured these currents by means of the capillary electrometer. Waller, in 1887, first applied the method of measurement to man after it was found by him that the heart currents could be demonstrated in animals without opening the chest. In 1903 Einthoven introduced the galvanometer for recording the heart currents.—D. J. Ingle (Mayo Foundation).

4097. Leiner, M. Die physiologischen Grundlagen der Nachkommenfürsorge bei den Seenadeln (Syngnathidae). (The physiological foundations of the care of offspring in the pipe-fish.) *Z. vergl. Physiol.*, 1936, 23, 147-208.—This is a thorough physiological study of the fluid media in the breeding-tubes and pouch of the male pipe-fish, which carry the eggs and young respectively. These fluids deviate physico-chemically from sea water

at specifically different stages of development. These matters are important for the carrying of eggs or of young, for the destruction of fungoids, and for the resorption of destroyed embryos. As a result of the highly stable physiological circumstances described in the pipe-fish and sea-horse, approximately 90% of eggs laid develop into young individuals.—T. C. Schneirla (New York University).

4098. Lissitsa, F. M., & Pentsik, A. S. Proksimalnaya reaktsiya opory. (The proximal postural reflex.) In Rokhlin, L. L., *Problemy Klinicheskoi i Eksperimentalnoi Nevropatologii i Psikiatrii*. Kharkov: Ukr. Psikhonevrol. Akad., 1936. Pp. 382-390.—In a series of patients with lesions of the central nervous system, passive movement of the upper part of an extremity produced changes in tonus of other parts. For example, a passive flexion of the hip of 80°-110° produces a decrease of extensor tonicity and an increase of flexor rigidity. This reaction was named the proximal postural reflex (proximal reflex of support), as analogous to the well-known reflex of the distal portion of the limb. The reflex usually occurs with a certain optimal degree of muscular hypertonus, and with lesions at different levels of the corticospinal system. 9 figures. English and French summaries.—L. J. Stone (Columbia).

4099. Markuszewicz, R. Konflikt popędowy. (The conflict of impulses.) *Roczn. Psychiat.*, 1937, 29/30, 163-189.—The propagative instinct and the instinct of self-preservation, closely connected with each other but fundamentally irreconcilable, form the source of psychic energy. The author describes the rise of the conflict between these two instincts among girls and boys, and explains the emotion of fear as due to the conflict between these instincts.—S. Blachowski (Poznań).

4100. Minkiewicz, R. Les types de comportement des mâles de Sphétiens. Les Pompilides à nid fixé et ceux à nid momentané. (Types of behavior in the male *Sphex*. Pompilids with fixed or temporary nests.) *Bull. ent. Pologne*, 1934, 13, 1-20.—The author has gathered male *Sphex* of different species into 9 different categories, according to the type of pre-mating behavior exhibited. His divisions follow: the peripatetic look-out, the inspector at large, the sentinel, the rotating inspector, the escort, the stationary inspector, the nest guard, the building aid, and the simple visitor. In addition, the author makes a report on his observations of the digger pompilid *Cryptochilus*, which installs itself in the burrows made by the burrowing bee (*Halictes*). After having captured a spider, it makes a trip to the burrow and then comes back to get the prey and pull it backwards by easy stages into the burrow. On a site where the burrow was obliterated, a female *Cryptochilus* persisted in returning to it several times during the course of several consecutive hours.—(Courtesy *Année psychol.*)

4101. Opitz, E., & Tilmann, O. Experimentelle Untersuchungen über das Verhalten des Blut-

kreislaufes und die Atmung im Unterdruck. III. Mitteilung, Über das Elektrokardiogramm im Unterdruck. (Experimental studies on the behavior of circulation and respiration in reduced atmospheric pressure. Part III. The electrocardiogram.) *Luftfahrtmedizin*, 1936, 1, 153-177.—P. L. Krieger (Leipzig).

4102. Peraita, M. Summationserscheinungen bei den Sehnenreflexen unter normalen und pathologischen Bedingungen. (Summation phenomena in tendon reflexes under normal and pathological conditions.) *Z. ges. Neurol. Psychiat.*, 1936, 156, 614-620.—The writer studied the effect of a preliminary stimulus upon the strength of a reflex (Achilles, patellar, etc.) released a small fraction of a second later by a second stimulus. The stimuli were delivered by means of a double electromagnetic hammer, and the reflex action-currents were measured by a string galvanometer. The conclusion is drawn that tendon reflexes show distinct summation phenomena when the two stimuli are presented at a very small interval of time.—C. W. Fox (Rochester).

4103. Peraita, M. Beziehungen zwischen Sehnenreflexen und Reflexsynergien. (Relations between tendon reflexes and reflex synergies.) *Z. ges. Neurol. Psychiat.*, 1936, 156, 628-632.—It is well known that relations exist between tendon reflexes, aroused by stimulation of intramuscular receptors, and reflexes originating from extramuscular receptors, provided that the reflexes (or at least their efferent parts) involve the same segments. In this study the problem is that of the relationship between reflexes involving distant segments. For example, does the arousal of a flexion reflex in the lower extremities change the excitability of tendon reflexes in the upper extremities? Patients with a unilateral syndrome of the pyramidal path were selected as subjects, since in these cases it is easy to set up a constant reflex (the flexion synergy) originating from extramuscular receptors. The inhibition of the patellar reflex appearing in such cases during the course of a flexion reflex synergy goes along with a heightening of excitability of the tendon reflexes in the upper extremities.—C. W. Fox (Rochester).

4104. Piéron, H. Sens du temps et horloge chimique de l'abeille à l'homme. (The sense of time and the chemical clock from the bee to man.) In Various, *Livre jubilaire de M. L. Bouvier*. Paris: Firmin Didot, 1936. Pp. 269-272.—Besides the daily solar, the lunar, and the seasonal rhythms, organisms exhibit their own rhythms, possessing personal internal clocks which do not necessarily have the same speed. This fact is particularly observable in conditioned reflexes which are linked with a time element, with a rhythmical change, without external stimulation. In man the study of the sense of time indicates a direct perception of short intervals and an intellectual evaluation of long durations. This perception of duration is, moreover, influenced by temperature. The author does not believe in a general "moment" unit, as

the visual moment, for example, is very different from the auditory or the tactile moment.—*M. H. Piéron* (Sorbonne).

4105. Pranker, T. L. Studies in geotropism of the pteridophyte. V. Some effects of temperature. *Proc. roy. Soc.*, 1935, 116 B, 479-493.—In *Asplenium bulbiferum* the liminal action time of stimulation by weight is twice as much at 10° as at 20°; the latency of response is also nearly twice as long, the rate of increase being only a third as much. The maximum ought to be at about 25°; at 30° the latency is the same as at 20°. Temperatures around 30° are already harmful for the perceptive phase, but not yet for the reactive phase. The data appear to indicate a chemical mechanism of reception.—*M. G. Willoughby* (Brown).

4106. Putnam, T. B., & Merritt, H. H. Experimental determination of the anticonvulsant properties of some phenyl derivatives. *Science*, 1937, 85, 525-526.—By applying electrical stimulation to animals by means of a bit and occipital electrode which are in a circuit so that shocks of different intensities and speeds may be given, it is possible to induce convulsive attacks in animals. The apparatus is described. It is found that with this procedure the anticonvulsant effect of certain compounds is to raise the convulsive threshold from 50% to 300-400%. From tests carried out with many compounds it is found that those having the greatest anticonvulsive results with least bad effects are diphenylhydantoin, acetophenone, and benzophenone.—*F. A. Mote, Jr.* (Brown).

4107. Rabaud, E. Le stéréotopisme des pagures. (Stereotropism in hermit-crabs.) *C. R. Acad. Sci., Paris*, 1936, 202, 350-352.—The author studied the question of what determines the hermit-crab's choice of a shell as a habitat. Most writers give as a reason the need of defense, and appeal to the relation of cause and effect regarding the habitat and the crab's morphological conditions (decalcification of its covering, asymmetry of the abdomen, etc.). The author believes, however, that this installation in a shell is the result of stereotropism. Being very sensitive to stimulations from outside (tactile and analogous stimuli), the crab endeavors to immobilize itself where these stimuli cannot affect it.—*M. H. Piéron* (Sorbonne).

4108. Rich, W. S. "Homing" of Pacific salmon. *Science*, 1937, 85, 477-478.—If it is essential that the criteria of Huntsman (*Science*, 1937, 85, 313) be accepted complete evidence is lacking that salmon do "home." However, the author feels confident that Pacific salmon return to their home streams from long distances and that comparatively few are lost. There is ample evidence of intraspecific racial segregation. This seems to be the chief claim for the truth of the "homing" hypothesis. The salmon races are maintained, which would not be possible unless the races specific to a region returned to it before spawning.—*F. A. Mote, Jr.* (Brown).

4109. Richet, C. Un instinct des chenilles processionnaires. (An instinct in processionary cater-

pillars.) In Various, *Livre jubilaire de M. L. Bouvier*. Paris: Firmin Didot, 1936. P. 281.—*M. H. Piéron* (Sorbonne).

4110. Roubaud, E. Le besoin de vol dans le comportement sexuel chez les insectes ptérygotes. (The need of flight in the sexual behavior of pterygote insects.) In Various, *Livre jubilaire de M. L. Bouvier*. Paris: Firmin Didot, 1936.—In many insects a period of free flight (nuptial flights) serves as a preparation for copulation. The author believes that this flight exercise may be considered, for physiological reasons, as an indispensable preparation for sexual approach.—*M. H. Piéron* (Sorbonne).

4111. Sanford, R. N. The effects of abstinence from food upon imaginal processes: a further experiment. *J. Psychol.*, 1937, 3, 145-159.—5 different "tests," or sets of stimuli which might or might not provoke food responses, were administered to 27 subjects at the conclusion of a 24-hour fast, and to 37 other subjects at various times during a normal eating cycle. 18 of the subjects who fasted were examined two weeks later during a normal eating cycle. The food responses increased with time during the normal eating cycle and over a 24-hour period, supporting the author's hypothesis that food responses vary in frequency with the strength of the need for food. Over a 24-hour period the increase in food responses is not in direct ratio to the increase in time, the fasters' average being only slightly greater than that of subjects examined near the close of the normal eating cycle. Evidence from observation of the subjects who fasted and from their own casual reports indicated that a process of "suppression" toward thoughts of food was in operation.—*E. D. Hunt* (Brown).

4112. Shull, A. F. The needs of the mimicry theory. *Science*, 1937, 85, 496-498.—The author is here criticizing the mimicry theory, which he has previously criticized in a recently published book but which has meanwhile been supported by Carpenter (*Science*, 1937, 85, 356-359). Regarding the basis of mimicry, it is stated that the critical biologist "will hold that these judgments (of what is involved in mimicry) lie mainly in two fields, genetics and animal behavior." In genetics lies the most hopeful approach to the question of the origin of mimicry. Regarding studies of animal behavior, caution is urged against accepting conclusions from such studies when it is not known whether they are adequate. The studies of Reighard on coral reef and other small fishes and their neighboring predators and the work of McAtee on the stomach contents of birds are considered adequate. The author appeals for the necessity for obtaining standards of evidence; he is against arguing from purely theoretical grounds, and he asks that animal studies be made more objective.—*F. A. Mote, Jr.* (Brown).

4113. Smith, M. W. Selection of food by the ciliate *Chilodon*. *Science*, 1937, 85, 544.—In water fertilized by .45 gram fish meal per liter, and containing per cubic centimeter 5,152,000 *Scenedesmus*, 124,000 *Chlamydomonas*, and 1900 *Chilodon*, it was

found that the ciliates had gorged themselves on *Chlamydomonas*. Few had taken *Scenedesmus*, although these cells were present in much greater quantities than the *Chlamydomonas*. "Thus, it would appear that, under these conditions at least, *Chilodon* is definitely capable of selecting its food."—*F. A. Mote, Jr.* (Brown).

4114. Tiffin, J. *Human vocal cords in action*. (Film.) Chicago: Stoelting, 1934. 127 feet, 16 mm. \$18.40.—This film shows the structure of the vocal cords and adjacent organs and their functioning during breathing and speaking. Some of the pictures are taken with slowed motion.—*L. F. Beck* (Oregon).

4115. Tirala, L. G. *Sport und Rasse*. (Sport and race.) Frankfurt: 1936. Pp. 206.—The characteristic endurance performances of Indian, Mongolian and negroid runners depend on a lesser sensitiveness of their nervous systems to fatigue and fatigue products, not on special training, which would be considered superior to that of the Nordic race.—*P. L. Krieger* (Leipzig).

4116. Tramer, M. *Die Bereitschaft, Einführung in die Untersuchung über eine anthropobiologische Funktionsklasse*. (Readiness; introduction to the investigation of an anthropobiological class of functions.) *Schweiz. Arch. Neurol. Psychiat.*, 1936, 38, 255-269.—Readiness indicates an anticipated, tension-directed form of behavior, and applies not only to psychological but also to morphological, physiological, and anthropological spheres. The specific stimulus bringing to actuality a tension may be endogenous or exogenous. Fight-readiness or attack-readiness offers a good example of the psychological (subjective feelings of restlessness, urge to activity, etc.) and physiological changes (changes in muscle tonus, vaso-motor changes, etc.) accompanying a readiness. Certain physiological changes have been found to be reliable indicators of the level of readiness. In addition to individual readinesses, the author also discusses readiness in its collective form, e.g. war-readiness. This readiness reaches the danger point when to tension is added compulsion. To this is closely related self-sacrificing-readiness. Readiness tendencies may be either passive or active.—*G. F. J. Lehner* (Brown).

4117. Tzonis, K. *Elektrotaxis, Elektronarkose, Elektrometanarkose und Elektrohypnose bei Myriopoden (Tausendfüßler)*. (Electrotaxis, electronarcosis, electrometanarcosis, and electrohypnosis in myriapods or millipedes.) *Z. vergl. Physiol.*, 1936, 23, 247-252.—When a "pulsating-direct" current was passed through a dish of water in which certain myriapods (e.g., *Polydesmus*, *Julus*) were swimming, the animals passed toward the anode. Animals in all of the investigated species passed into an immobilized condition ("electronarcosis") when the current was sufficiently increased in amperage. This condition varied (e.g. toward "electrometanarcosis") in correspondence with changes in the rate of current increase and other stimulus changes. For instance, gradually increasing the amperage,

then suddenly breaking the circuit, produced "electrohypnosis" in *Julus*, although not in other species. Species differences in behavior within an electric field were notable.—*T. C. Schneirla* (New York University).

4118. Veits, C. *Quantitative Untersuchungen über Pulsionsreflexe nach äqualen Doppelspülungen am hängenden Menschen*. (Quantitative studies on pulsion reflexes in the dependent position, following equal bilateral irrigations.) *Arch. Ohr., Nas.- u. KehlkHeilk.*, 1937, 142, 316-324.—In all deviations of the head from the indifferent position there is, in addition to sensations of movement and a characteristic nystagmus, also a fall or tendency to fall (pulsion reflex). The tendency is to fall in the same plane as the previous movement of the head from the indifferent position, but after hot irrigations in the same and after cold ones in the opposite direction. Similar experiments were undertaken with persons hanging by the arms, either with rings under the axillae or on a bar. The reflex muscular contractions following bilateral stimulation of the labyrinth remain, naturally, always the same, but they work out differently in different positions of the point of support. From the graphs of the leg movements, the duration and extent of the movement are determined, as well as the latent period between change of position of the head following irrigation in the indifferent position and the appearance of the reflex.—*P. L. Krieger* (Leipzig).

4119. Weyrauch, W. *Untersuchungen und Gedanken zur Orientierung von Arthropoden. 3. Die Formen der Reaktionsverbindungen im Zweilichterversuche und ihr Ausdruckswert*. (Investigations and reflections on the orientation of arthropods. 3. The types of reaction sequences in double-light experiments and an index for expressing them.) *Zool. Jb.*, 1935, 55, 431-486.—(*Biol. Abstr.* XI: 8508).

4120. Weitkewitsch, A. A. *Hyperthyreoidisationsversuche an jungen Tauben*. (Experiments involving the hyperthyroidization of young pigeons.) *Z. vergl. Physiol.*, 1936, 23, 237-246.—Thyroidin feeding after the third post-hatching day resulted in depression of development in young pigeons. After 15 days the thyroid gland was only one-third its normal size, the adrenal cortex was hypofunctional, the uropygial gland very small, and the fat supply was greatly decreased below the normal amount.—*T. C. Schneirla* (New York University).

[See also abstracts 3963, 3986, 3989, 4018, 4028, 4065, 4125, 4136, 4197, 4217, 4221, 4262, 4291, 4303, 4310, 4408.]

PSYCHOANALYSIS, DREAMS, HYPNOSIS

4121. Bennett, C. *Hypnotic power*. New York: Dutton, 1937. Pp. xi + 158. \$1.50.—A discussion of hypnotism for the layman which aims to give him an understanding of its background and some insight into its technique and uses.—*D. Shakow* (Worcester State Hospital).

4122. Berreman, J. V., & Hilgard, E. R. The effects of personal heterosuggestion and two forms of autosuggestion upon postural movement. *J. soc. Psychol.*, 1936, 7, 289-300.—30 college students were given the suggestion that they were falling forward after they had been blindfolded and a thread attached to their clothes to record postural movements. The three forms of suggestion, heterosuggestion by the experimenter, autosuggestion of instructions repeated aloud, and autosuggestion of imagined falling, produced nearly the same results either in an increase in the amount of oscillation or in actual displacement forward. Measures of oscillation under the various forms of suggestion showed high intercorrelations, as did the amount of displacement, but amount of oscillation correlated only .55 with displacement. A progressive learning during the course of the experiment was shown, consisting largely of a shift on the part of the negative subjects to a positive response. No correlation with intelligence was found.—E. B. Newman (Swarthmore).

4123. Epshtein, A. L. Problema funktsii bodrstvo-vaniya v psikhiiatrii. (The problem of the function of wakefulness in psychiatry.) In Rokhlin, L. L., *Problemy Klinicheskoi i Eksperimentalnoi Nevropatologii i Psikhiiatrii*. Kharkov: Ukr. Psikhonevrol. Akad., 1936. Pp. 272-279.—Vigilance (waking) is held to be the result of a special biological function which unifies, coordinates and organizes conscious processes in the waking state. It is, in part, an "antihypnotic" function, but also has a regulative function, viz., that of determining reality by the organization of real objects with the ego, and a "biotonic" function establishing the affective and voluntary basis of behavior. The understanding of these processes is of psychiatric significance. English and French summaries.—L. J. Stone (Columbia).

4124. Forsgren, E. Om drömmar och karaktärsanalys. (Concerning dreams and character analysis.) *Svenska Läkartidn.*, 1937, 34, 633-635.—A few examples of dreams of wish-fulfilment.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4125. Sears, R. R. Initiation of the repression sequence by experienced failure. *J. exp. Psychol.*, 1937, 20, 570-580.—Failure at a competitive task satisfies the conditions necessary for testing the repression hypothesis in that there are established antagonistic anticipatory responses which, on subsequent attempts, will block the sequence of acts. The present experiment provides two tests of the development of these antagonistic anticipatory responses. Subjects were divided into two groups on the basis of preliminary trials at learning nonsense syllables and at card-sorting. Each S was then given 15 trials at card-sorting on each of three days, preceded and followed on each occasion by the learning of a list of nonsense syllables by the anticipation method. The groups were differentiated by their success or failure at card-sorting. These conditions were produced by false statements con-

cerning the S's performance on each trial in comparison with his own past performance and those of others in the group. The success group showed a greater gain in learning trials in the post-card-sorting learning over the pre-card-sorting learning than the failure group. The success group also showed increased speed of card-sorting from the 1st to the 15th trials on each of the three days, while the failure group showed decreasing speed.—H. W. Karn (Pittsburgh).

4126. White, R. W. Prediction of hypnotic susceptibility from a knowledge of subject's attitudes. *J. Psychol.*, 1937, 3, 265-277.—Hypnotizability is conceived to be governed by two types of factors, dynamic and attitudinal. In order to ascertain whether dynamic factors play an appreciable role, two attempts were made to predict the rank order of hypnotizability of 15 S's, (1) by means of an autobiography and reports of 4 interviews, and (2) on the basis of the guesses of 7 judges based upon attitudes manifested by the S's in a story told about hypnosis during an imagination test. The coefficients of correlation were $.40 \pm .14$ and $.34 \pm .16$ respectively between these tests and empirical hypnotizability. The smallness of these coefficients and the fact that the 7 most hypnotizable all stated in their stories that the imagined hypnosis was a success are interpreted to indicate that hypnosis is a peculiar rather than a typical social situation, and likely to arouse in some individuals an attitude at variance with their common attitudes.—J. McV. Hunt (Brown).

4127. White, R. W. Two types of hypnotic trance and their personality correlates. *J. Psychol.*, 1937, 3, 279-289.—An active variety of hypnosis, distinguished from a passive type by the absence of delay and difficulty in making suggested movements, was shown to appear in persons who, from appearance and introspective report, are eager to be hypnotized and seem to enjoy their state of submission. Persons exhibiting passive hypnosis seemed concerned with repose, and were inclined to resist disturbance. Clinical judgments of the 28 subjects characterized those exhibiting active hypnosis as tending toward deferential and affiliative behavior, while passive subjects ranked high in habitual anxiety in stressful situations.—J. McV. Hunt (Brown).

[See also abstracts 4241, 4378, 4399, 4402, 4403.]

FUNCTIONAL DISORDERS

4128. [Anon.] Selected references on social psychiatry. *Amer. J. Sociol.*, 1937, 42, 892-894.—These references were compiled from lists sent in by psychiatrists and sociologists in response to an editorial invitation to recommend books or articles in psychiatry that would be helpful to students of society.—E. D. Hunt (Brown).

4129. Bixler, E. S. A forerunner of psychiatric nursing. *Ann. med. Hist.*, 1936, 8, 518-519.—Jean-Baptiste Pussin, the chief supervisor for

Pinel in the care of his patients, is described as a forerunner of the psychiatric nurse of today.—*D. J. Ingle* (Mayo Foundation).

4130. **Blumer, H.** Social disorganization and individual disorganization. *Amer. J. Sociol.*, 1937, 42, 871-877.—The psychiatric contributions seem to present the following composite position: (1) social disorganization is an extension of individual disorganization; (2) it is unconsciously motivated; (3) it is a product of unfortunate childhood experiences; and (4) its elimination requires an effective scheme of childhood education. Much social disorganization cannot be thought of as arising out of individual disorder. Individual disorder seems to gain its opportunity for expression where social disorganization prevails. The problem of how social disorganization results in individual disorder is uncharted. Its solution depends upon fuller knowledge of the psychology of shared values and of semi-unwitting social rhythms.—(Courtesy *Amer. J. Sociol.*)

4131. **Bradway, K. P.** Birth lesions in identical twins. *Amer. J. Orthopsychiat.*, 1937, 7, 194-203.—In each of two pairs of apparently identical twins, one twin was injured at birth. The uninjured twin was available as a control subject. One of the injured twins shows motor handicap without mental handicap, the intracranial birth lesion being demonstrable by neurological examination and prenatal history. The other injured twin shows mental subnormality with motor handicap, the intracranial lesion in this case being presumptive in the absence of other plausible etiology, and in the presence of a positive history for plausible birth injury. The subject material demonstrates the possibility of either type of injury with the other and permits a study of the behavioral consequences of both types of injury in comparison with each other and in relation to a native endowment which can be assumed from the condition of the co-twin.—*E. D. Hunt* (Brown).

4132. **Braem, H. R.** Sociological study of patients admitted to Letchworth Village from Greater New York and environs. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 147-159.—The character of the populations of state institutions for the feeble-minded is changing. Such institutions now care for the extreme deviates of this group, namely those very low-grade cases who cannot be handled at home or in school, and the high-grade defectives who are becoming delinquent in their own social situations. Study was made of 1174 cases entering Letchworth Village with regard to birthplace of parents, sex, age at commitment, and residence. Findings show that children of foreign parentage outnumber the American born; that commitment to an institution for the feeble-minded is a matter of youth (over three-fourths were under 19 years of age); that the delinquent acts of the feeble-minded are not of as serious nature as those of normal delinquents; that in the case of antisocial behavior males tend to commit acts against property and

persons while females are frequently involved in sexual indiscretions; and that localities in which crime and delinquency flourish also contribute a large proportion of the feeble-minded committed to state institutions.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4133. **Brunn, L.** Die Psychopathie des Kindesalters in gerichtsarztlicher Beziehung. (Psychopathy of childhood in relation to forensic medicine.) Berlin: R. Schoetz, 1937. Pp. 39. M. 1.50.—*R. R. Willoughby* (Brown).

4134. **Campbell, C. M.** Les tendances actuelles de la psychiatrie aux États-Unis. (The present tendencies of psychiatry in the United States.) *Ann. méd.-psychol.*, 1937, 95, Part 1, 736-752.—Psychiatric conditions vary a great deal in different parts of the United States. Most institutionalized psychotic patients are in state hospitals. During the last twenty years psychiatry has not only penetrated the medical profession and become respectable therein, but has penetrated the public interest and been adapted in some manufacturing and commercial concerns as well as in some general hospitals. The National Committee on Mental Hygiene and the American Psychiatric Association have done much to increase the standards of training for specialists in the field, and to arouse public interest. Research has included specific laboratory technique and more general considerations of the patient in regard to his environment. Psychoanalysis has been more influential than many care to admit.—*M. B. Mitchell* (Bellevue Hospital).

4135. **Carter, J. W., Jr.** A case of reactional dissociation (hysterical paralysis). *Amer. J. Orthopsychiat.*, 1937, 7, 219-224.—A case history and a discussion of the treatment employed are given to illustrate the efficacy of the organismic viewpoint when applied to abnormal behavior of "biographic" origin.—*E. D. Hunt* (Brown).

4136. **Chappell, M. N., Stefano, J. J., Rogerson, J. S., & Pike, F. H.** The value of group psychological procedures in the treatment of peptic ulcer. *Amer. J. dig. Dis. Nutr.*, 1937, 3, 813-817.—Emotional disturbances bring about a hypermotility, spasm, flaccidity and decreased blood supply to the gastro-intestinal tract. The emotional hyperactivity must be reduced before the body can cure itself readily. 52 patients having the characteristic symptoms of peptic ulcer were divided into two groups. The experimental group of 32 were trained daily for seven weeks in the control of worry, discussion, effort, and self-suggestion. A control group of 20 patients were trained for similar periods in non-psychological subjects. After being trained for three weeks 31 of the experimental group were free from subjective symptoms. 26 patients of the experimental group remained symptom-free after the end of the treatment. All the patients of the control group were made free from symptoms as a result of diet and medication, but within two weeks after the expansion of diet there was a recurrence of symptoms in 18 cases out of the group of 20. It is

concluded from these results that not only does the group psychological training aid in the initial amelioration of symptoms, but it aids in keeping the patient in good health after the training has been completed.—*D. J. Ingle* (Mayo Clinic).

4137. **Conrad, K.** *Zwillingsspathologie*. (Pathology of twins.) *Fortschr. Neurol. Psychiat.*, 1937, 9, 197-209.—This article presents the material concerning pathology of twins published since 1932. There is a large body of material discussed in sections devoted to general reviews of the field, psychiatric studies including investigations of manic-depressive psychosis, feeble-mindedness, epilepsy and psychopathy. A section is also devoted to neurological studies. There is a bibliography.—*D. S. Oberlin* (Delaware State Hospital).

4138. **Davenport, C. B.** Causes of retarded and incomplete development. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 208-214.—The feeble-minded as a group are characterized by general subnormal development. Both physical and mental development reveal dwarfism. The author presents evidence that "all along the course of germ cell history, at fertilization and during all stages of development events may occur involving the genes, the union of genes and the working out of genes during development that may be responsible for retarded or dwarfed development." Animal experimentation to determine the causes and effects of such defects is needed. Until causes are known prevention and cure cannot follow.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4139. **Doll, E. A.** The lesson at Gheel. In Pollock, H. M., *Family Care of Mental Patients*. Utica, N. Y.: State Hospitals Press, 1936. Pp. 115-135.—The author describes and advocates the Gheel plan of supervision of mental patients, since the foster family is able to assume an objective attitude toward the patient which is less protective or less obsessive than that of his own family, but is more solicitous and more personal than the attitude of the public institution.—*E. T. Raney* (Brown).

4140. **Doll, E. A.** Developmental aspects of therapy. *Amer. J. Orthopsychiat.*, 1937, 7, 133-141.—In his presidential address before the fourteenth annual meeting of the American Orthopsychiatric Association, the author presents considerations in clinical psychology which are helpful in the field of orthopsychiatry. The concept of normality may be considered from three points of view, (1) whether what the average child actually does at a given age should be considered normal, or (2) whether what he could learn to do at that age should be considered normal, or (3) whether what we adults would like to have him do should be considered normal. It is essential to the progress of work with children that "we study not only problem children but also children's problems."—*E. D. Hunt* (Brown).

4141. **Doll, E. A.** Current thoughts on mental deficiency. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 33-49.—In his presidential address the author in critical fashion summarizes the current ideas about

the definition of mental deficiency, its diagnosis, classification, treatment, training, community supervision and control, sterilization, institutional segregation, and the opportunities and needs for research. He points out that persons of subnormal intelligence who are socially competent cannot by definition be considered feeble-minded. Mental retardation alone should never be used as a priori evidence of social incompetence, but rather such retardation should be used to account for the incompetency. Acknowledging the essential incurability of mental deficiency at present in terms of its constitutional bases, he feels that its amelioration is best served by systematic training along social and industrial lines. "If we can ever learn to teach the feeble-minded what they can master and will make use of, and if we could accept them as they are rather than trying to make them over into what we would like them to be, we could probably take critical steps toward a new day in the training of the feeble-minded." The condition should be viewed in terms of its social effects, and then systems of training may be conceived which might well result in partial or temporary, if not complete, social adequacy under certain conditions.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4142. **Dowling, H. E.** An analysis of the visual findings in subnormal individuals. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 168-182.—Visual findings in persons of subnormal mentality parallel those of normal individuals.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4143. **Ellis, W. J.** New Jersey's program of classification and coordination of state institutions. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 263-267.—Organized in 1918, the New Jersey Department of Institutions and Agencies now supervises nineteen state institutions. The department is responsible for "coordinating the activities of both the hospital and correctional types of institutions, establishing the general policies, supervising management, compiling and transmitting budget requests, and supplying necessary supervision and expert staff services to the local institutional units." The administrative plan, general responsibilities and outstanding policies are briefly discussed.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4144. **Ford, A.** Behavior of the feeble-minded. (Film.) Chicago: Stoelting, 1932. 267 feet, 16 mm. \$24.00.—A comparison between institutional cases and normal subjects on the Healy and Fernald test for assembly of blocks is shown. Time measurements are exhibited in the pictures.—*L. F. Beck* (Oregon).

4145. **Freeman, M.** Drawing as a psychotherapeutic intermedium. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 182-187.—Spontaneous drawings were used as a means of communication between certain socially maladjusted high-grade mental deficient and their physician. Cases are cited illustrating the application of such psychotherapy.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4146. Frets, G. P. *Die Familie A. B.* (The family A. B.) *Z. ges. Neurol. Psychiat.*, 1935, 152, 98-106.—Having previously reported on the descent of a melancholic, the family A. A., the author in this article reports on the descent of a sister of A. A., the family A. B. Whereas the family A. A. showed several cases of mental derangement, the family A. B. remained undamaged except for a few cases of slight psychopathy. The author attributes this to the fact that the individuals who entered into the family A. B. through marriage were without mental defects.—(Courtesy *Année psychol.*)

4147. Gartland, R. M. *Psychiatric social service in a children's hospital.* Chicago: Univ. Chicago Press, 1937. Pp. 105. \$1.25.—The monograph describes the functioning of the Child Guidance Clinic of Bobs Roberts Memorial Hospital for Children (University of Chicago) at the time when Herbert E. Chamberlain was psychiatrist in charge of the clinic and the writer was in charge of the clinic's social service work. The purpose of the survey is to determine the value of psychiatric social service in a children's hospital. The study includes chapters on statistical analysis of case load; types of problems presented; types of service rendered; and one detailed case description. Some of the current theory underlying the practice of psychiatric social work is discussed. Some implications for integration between psychiatric and pediatric clinics are cited.—*E. Alpern* (Providence Child Guidance Clinic).

4148. Gebattel, V. E. v. *Zur Frage der Depersonalization.* (Ein Beitrag zur Theorie der Melancholie.) (The problem of depersonalization: a contribution to the theory of melancholia.) *Nervenarzt*, 1937, 10, 248-257.—Depersonalization is important for the understanding of manic-depressive persons because it reveals the specific nature of their existence more clearly than the more obvious symptoms of inhibition, moodiness or feelings of insufficiency. It is a manifestation of existence in a vacuum, and is consequently, as all the other melancholic and maniacal symptoms attest, the existential basis of manic-depressive insanity.—*P. L. Krieger* (Leipzig).

4149. Gesell, A. *Motor disability and mental growth: the psychological effects of a cerebral birth palsy.* *Psychol. Rec.*, 1937, 1, 87-94.—A. C. was stricken with cerebral palsy as a result of obstructed cerebral blood supply at the time of birth. He showed surprising approximation to a normal as opposed to a feeble-minded mental organization, particularly in the field of social and emotional behavior. He presented behavior characteristics which proved that his central nervous system was not uniformly arrested by the ischemia which so extensively damaged the functions of his tactile-motor system.—*E. D. Hunt* (Brown).

4150. Harms, E. *Ein Korrekturproblem psychiatrischer Nomenklatur.* I. (The problem of correcting psychiatric nomenclature.) *Psychiat.-neurol. Wschr.*, 1937, 39, 1-3.—This paper, the first of a

scheduled series on social and individual psychiatry, is concerned with the revision of psychiatric nomenclature from the practical point of view. Present nomenclature, which arose out of somatic, individually perceived symptoms, does not take sufficient consideration of preceding and possible subsequent events. Some names, such as claustrophobia, already indicate the desired specificity. Others suggested as examples by the author are: occupation-neurosis, conversion-neurosis, developmental-neurosis, and sexual-neurosis; the last subsumes puberty-, engagement-, divorce-, and climacteric-neuroses. Even more specifically, one might speak of occupational-depression or -schizophrenia. These terms indicate social causes and suggest therapeutic treatments with specific reference to these causes.—*G. F. J. Lehner* (Brown).

4151. Humphreys, E. J. *Development deficiencies as the essential problem of mental deficiency.* *Proc. Amer. Ass. ment. Def.*, 1936, 41, 215-224.—Defining the field of developmental deficiencies as a branch of medicine, the author includes therein "the study and treatment of developmental deficiencies which may appear in various combinations in the physical, intellectual and social aspects of the organism, with a tendency in all cases toward reduced social efficiency." He outlines the relationship of this branch of medicine to that of other experimental fields. He urges the Association on Mental Deficiency to coordinate its own resources in the development of research and to coordinate its findings with those of other associations interested in human development. He proposes that a national foundation for the study of developmental deficiencies be established.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4152. Jastak, J. *Psychometric patterns of state hospital patients.* *Delaware St. med. J.*, 1937, 9, 7-10.—The Stanford-Binet scale and the Army individual performance scale were administered to 100 state hospital patients (86 psychotic, 14 without psychosis). The psychometric pattern for the psychotics was found to be: vocabulary highest, Stanford-Binet next, manual performance lowest. All diagnostic categories showed the same psychometric pattern except the non-psychotic group. In this group there were no significant differences between scores. 23 of the psychotic group who were subsequently either paroled or discharged as improved showed smaller discrepancies than those of the psychotic group as a whole.—*M. Keller* (Brown).

4153. Johnstone, E. R. *Community care of the feeble-minded; development in New Jersey, U.S.A.* *Train. Sch. Bull.*, 1937, 34, 41-44.—Prior to 1888 a few mentally deficient children whose homes were in New Jersey went to the Elwyn, Pa., institution. In 1847 Stephen Garrison failed to get a bill passed in New Jersey for the establishment of an institution. In 1888 his son with others made arrangements which a year later led to a State Home, which is now Vineland State School. From 1900 to 1917 there was much interest but not much organization. A law was passed in 1911 making special classes

compulsory, and in 1903 a law prohibiting marriage of feeble-minded persons. The first laboratory in the state was opened in 1906. In 1918 a new department of institutions and agencies was formed. Work has gone steadily forward.—*E. M. Achilles* (Columbia).

4154. Keator, M. Industrial supervision of mentally inferior youths. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 89-95.—A city commission of Hartford, Connecticut, supervises the industrial adjustment of mentally inferior boys and girls who after leaving the special-class system in the public schools at about sixteen years have difficulty in finding jobs. The need for such supervision is great. A relatively small amount of supervision is said to suffice. Parents and children welcome the help. Welfare agencies cooperate. Tabular summaries list the types of work done, work preferences, number of calls made and jobs held.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4155. Kessler, M. Ein Fall von choreatischer Bewegungsstörung nach akuter Leuchtgasvergiftung mit günstigem Verlauf. (A case of choreiform movements, with a favorable course, following acute poisoning with illuminating gas.) *Nervenarzt*, 1937, 10, 262-264.—*P. L. Krieger* (Leipzig).

4156. Kinder, E. F., & Humphreys, E. J. The observation room as a method for the investigation of the behavior of mental defectives. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 71-81.—Using an observational method, the authors studied the general behavior patterns of mentally deficient subjects in a free situation with a variety of test objects. There were 57 subjects, most of whom had fairly high intelligence quotients. Results are discussed in relation to types and frequency of response for various levels. High-grade subjects showed a much greater frequency of response to test objects, whereas low-grades responded more frequently to items of person and clothing. "A study of the attraction value of the various test items showed that for the high-grade subjects the distribution of interest increased with increases in chronological and mental age. In range of interest the low-grade subjects were more like the older high-grades than like those with whom they corresponded most closely in mental age range." This psychiatric-psychological technique is reported as productive of data not obtainable under test conditions or in interview situations.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4157. Knigge, F. Zur forensischen Bedeutung der Simulationsfrage. (On the legal significance of the problem of simulation.) *Z. ges. Neurol. Psychiat.*, 1935, 152, 163-177.—The passage from conscious simulation to hysterical symptoms can be avoided if the simulator is placed in a concentration camp and given intense work to do. Institutions can thus be freed for patients with definitely criminal tendencies.—(Courtesy *Année psychol.*)

4158. Laughlin, H. H. Further studies on the historical and legal development of eugenical

sterilization in the United States. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 96-110.—"These researches are purely objective and historical; they make no advocacy of specific policy. The present paper and its accompanying charts (numbers 1-12) bring the legal, legislative and statistical records of eugenical sterilization in the United States down to January 1, 1935. These studies have assembled at first hand the more recent facts in the field of eugenical sterilization. They have then analyzed these facts in an effort to mark the general trend in this relatively new kind of eugenical effort by the State, and to determine its eugenical meaning."—*M. W. Kuenzel* (Children's Home, Cincinnati).

4159. Leidler, R. Der Schwindel bei Erkrankung des Hirnstammes. (Vertigo in diseases of the brain stem.) *Msschr. Ohrenheilk.*, 1936, 70, 1315-1318.—Leidler illustrates the difficulties in following out the localizing value of vertigo. It cannot be considered as an exclusive symptom of either irritation or inhibition of the vestibular system, since it is always present in both. It represents the psychic correlate of disturbances in the smooth running of all the mechanisms controlled by the unconscious labyrinthine function.—*P. L. Krieger* (Leipzig).

4160. Lindquist, T. De l'acalculie. (Acalculia.) *Acta med. Scand.*, 1935, 87, 225-272.—The author's views on acalculia are contrary to those of Henschen, Goldstein and Head. He believes that acalculia may set up different mechanisms in which visual, kinetic or verbal factors and disturbances of the higher psychic functions play a part. He gives an account of two observed cases of acalculia. In the first the patient, who suffered from amnesic aphasia, was not able to conceive of numbers without the original material objects, which he was still able to count; he was found to have a glioblastoma of the second left temporal lobe in its posterior part. In the second the patient, who was also lacking in the ability to form number concepts, could do simple additions and multiplications in a purely automatic, uncontrollable fashion; the clinical picture suggests a tumor of the left occipital lobe invading the temporal region.—(Courtesy *Année psychol.*)

4161. Marchionini, A. Beziehungen der Dermatologie zur Neurologie und Psychiatrie. (Relation of dermatology to neurology and psychiatry.) *Fortschr. Neurol. Psychiat.*, 1937, 9, 177-196.—The author reviews the publications of the last two years. They are grouped as follows: monographs of a general nature, articles on pathological histology, those on etiology and pathogenesis of skin diseases, clinical studies, and studies concerned with therapy. The subject matter is various, including work on herpes zoster, scleroderma and acne. Bibliography.—*D. S. Oberlin* (Delaware State Hospital).

4162. Meduna, L. v. Versuche über die biologische Beeinflussung des Ablaufes der Schizophrenie. (Studies on biological influences in the evolution of schizophrenia.) *Z. ges. Neurol. Psychiat.*, 1935, 152, 235-262.—The study relates to two groups of schizophrenics, the first composed of

13 cases not ameliorated by camphor injections, the second of 10 cases in which camphor injections were followed by abatement of symptoms. In both groups the injections brought on more or less frequent epileptic crises. In the first group (reduced to 10 cases) there were 229 injections, 1293 grams of camphor were absorbed, and the number of crises was 25; in the second group there were 128 injections, 700 grams of camphor were absorbed, and the number of crises was 62.—(Courtesy *Année psychol.*)

4163. Michaels, J. J. Neuropsychiatric aspects of calcium as viewed from the different levels of the personality. Review of the literature. *Arch. Neurol. Psychiat., Chicago*, 1935, 34, 362-389.—R. R. Willoughby (Brown).

4164. Mirelzon, L. A. O postkommotsionalnykh izmeneniyakh psikhiki. (Concerning psychological changes following concussion.) In Rokhlin, L. L., *Problemy Klinicheskoi i Eksperimentalnoi Nevropatologii i Psikhiiatrii*. Kharkov: Ukr. Psikhonevrol. Akad., 1936. Pp. 292-296.—Neurological and psychological consequences of cerebral injury are polymorphous, depending on a complex interrelationship of the personality, the location of trauma, the patient's environment, etc. Aside from specific reactions resulting from localized injuries, a diffuse reaction of the whole brain has been noted by Marie, Grasset, etc. Without describing cases the author indicates that he has found changes of the affective life and the "tempo" of life following concussion. The time elapsed since injury is important in the consideration of symptomatology. English and French summaries.—L. J. Stone (Columbia).

4165. Pollock, H. M. Personnel relations in state institutions. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 256-262.—Suggestions regarding personnel relations derived from procedures successfully employed in large industrial establishments are offered to managements of state institutions. Prevention of the great annual turnover of ward personnel is paramount.—M. W. Kuenzel (Children's Home, Cincinnati).

4166. Popenoe, P., & Fenton, N. Sterilization as a social measure. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 60-70.—Of the more than 23,000 persons sterilized in the United States since 1907, when the first sterilization law was adopted, nearly 9000 were feeble-minded. Twenty-eight states now enforce such laws. Females outnumbered males two to one. Recent laws are said to base need on social rather than eugenical grounds. The author discusses legal interpretations of various state laws, operations in private practice, etc. He reports on a research study of the social adjustment of 966 feeble-minded women sterilized under the California law. A four-point objective rating scale was used. Only in two or three cases out of each hundred is the girl proving to be a social menace. Nearly half are making a good adjustment in the community and two-thirds are adjusting with reasonable success according to the standards accepted for persons of their social,

economic, and intellectual levels.—M. W. Kuenzel (Children's Home, Cincinnati).

4167. Porot, A., Bardenat, —, & Leonardon, —. Contribution à l'étude des rapports de l'hallucination et du délire. Un cas d'hallucinations purement olfactives avec thème interprétatif de persécution chez un psychasthénique. (A contribution to the study of the relation between hallucinations and delusions. A case of purely olfactory hallucinations with persecutory interpretation in a psychasthenic.) *Ann. méd.-psychol.*, 1937, 95, Part 1, 753-763.—M. B. Mitchell (Bellevue Hospital).

4168. Quinn, K. V., Shea, J. T., & Yakovlev, P. I. Neurological syndromes in the mentally deficient. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 225-228.—Mental deficient are divided into two broad classes. The first class consists of those in whom the inferiority is more or less confined to the sphere of intellect and of psychic functions. Its individuals may possess all the physical equipment necessary for motor coordination, locomotion and sensory perception. The second class includes those in whom the inferiority of integrative functions of the nervous system involves not only the psychic level but also deficiencies in neurological and physical equipment. The neurological factor is said to play a leading role in the correct determination of the actual intellectual level and in prognosis. A case study illustrating the importance of the neurological factor is appended.—M. W. Kuenzel (Children's Home, Cincinnati).

4169. Riggs, A. F., & Richardson, H. K. The role of the personality in psychotherapeutics. *Ann. intern. Med.*, 1936, 10, 13-24.—The origins of the psychoneuroses lie in the phylogenetic and ontogenetic development of personality, in which may be found essential guides to the therapeutic approach. There are four levels of reaction: the reflexive, the instinctive, the intelligent and the ideal. These are based upon four developmental levels of the nervous system: the medulla, the thalamic region, the fore-brain, and the frontal lobes. The psychoneurosis arises out of an inner conflict between instinctive forces and the intelligent strivings. It is based upon a hypersensitiveness and the relative imbalance of instincts. The maladaptation is manifested by symptoms in the vegetative, somatic, emotional and intellectual fields.—D. J. Ingle (Mayo Foundation).

4170. Sapir, E. The contribution of psychiatry to an understanding of behavior in society. *Amer. J. Sociol.*, 1937, 42, 862-870.—Psychiatrists are becoming more aware of the social component in conduct, while social scientists are becoming more aware of the concerns of psychiatry. The concept of "interpersonal relations" constitutes a good meeting-ground. Psychiatrists, largely due to the problems with which their science began, have been excessively individualistic, and have tended to regard as universal and invariant modes of conduct found only in certain cultures. In the rebound from this view it is necessary to avoid the dangers of

"sociologism," which would disregard the true task of psychiatry, viz., the understanding of the fundamental and relatively invariable structure of the personality. Psychiatry will be of assistance to social analysis to the extent that it aids in revealing the intricate symbolic network which binds individuals together into collectivities.—(Courtesy *Amer. J. Sociol.*)

4171. Selling, L. S., & Flinn, H. L. A projected administrative scheme for the care of mentally retarded individuals. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 268-277.—Brief discussions of definition, classification, etiology and extent of mental deficiency are followed by the proposal of a method of compulsory state registration as a means of combating feeble-mindedness. Reasons are given for selecting the board of health division as the vehicle for carrying the problem of the mental defective through a mental-hygiene clinic. Local mental-hygiene units would expect to share with the public schools the problems of stabilizing and training the defective.—M. W. Kuenzel (Children's Home, Cincinnati).

4172. Serejski, M. Beiträge zur vergleichenden Psychiatrie. (Contribution to the study of comparative psychiatry.) *Arch. Psychiat. Nervenkr.*, 1935, 103, 510-538.—A commission was sent to study neuroses and psychoses in the region north of the Caucasus. It was found that psychasthenia and traumatic neuroses were very rare. When hysterical reactions were noted, they were usually of the introvertive type and were accompanied by depressive tendencies and disturbances of the neuro-vegetative system. The most frequent psychosis was schizophrenia, and its most common form catatonia; contrary to the generally relatively favorable prognosis for this form of schizophrenia, the rate of demential and mortal outcome was high. There were 5 cases of schizo-epilepsy: in one the epilepsy evolved from the catatonia; in the others the inverse was true. Among infectious diseases, neurosyphilis occupied an important place. General paralysis was about the same as in European countries. Cerebral syphilis took atypical forms, with epileptic crises and hallucinations. Epidemic encephalitis was represented, usually by hyperdynamic forms with aggressiveness. There were no alcoholic psychoses, although alcoholism was common. Psychoses were most common in men, neuroses in women.—(Courtesy *Année psychol.*)

4173. Serejski, M. Zur Fragestellung über Umfang und Klassifikation der Schizophrenen Reaktionen. (On the extent and classification of schizophrenic reactions.) *Z. ges. Neurol. Psychiat.*, 1935, 102, 310-323.—The author reports 9 cases of schizophrenic reaction which he verified in the course of involuntional paranoia, delirium tremens and degenerative psychosis. He makes a plea for delimiting schizophrenia, and for including within the classification only cases of true or essential schizophrenia.—(Courtesy *Année psychol.*)

4174. Shostakovich, V. V., Golubenko, E. P., Kulikova, E. F., & Pogibko, N. I. Atropinnye psikhozy. (Atropine psychoses.) In Rokhlin, L. L., *Problemy Klinicheskoi i Eksperimentalnoi Nevropatologii i Psikhiatrii*. Kharkov: Ukr. Psikhonevrol. Akad., 1936. Pp. 312-320.—While much is known of the effect of atropine on the autonomic nervous system, its effect on the higher centers is almost unknown. 20 cases of atropine poisoning were observed over a short period. A complex psychotic picture is found, exhibiting three stages: (1) hyperactivity of the sympathetic division; (2) strong motor excitement, hallucinations, delirium, etc.; (3) a comatose state. "The cure of the disease may be very stormy or somewhat prolonged, varying from a few hours to 4 days." Following the psychotic state headache, weakness, dullness and apathy may be found. Most patients later recall the psychotic state. The clinical picture, contrary to Bonhoeffer's principles of exogenous psychoses, has characteristics differentiating it from other acute intoxications. English and French summaries.—L. J. Stone (Columbia).

4175. Skälweit, W. Der Rorschach-Versuch als Unterscheidungsmittel von Konstitution und Prozess. (The Rorschach test as a means of differentiation between structure and function.) *Z. ges. Neurol. Psychiat.*, 1935, 152, 605-610.—The author replies to Bleuler's criticisms of his viewpoint on the difference between structure and function, summarizing it with the aid of data relating to 90 new psychograms. Introversion is a frequent characteristic of schizothymia (in Kretschmer's sense); it increases quantitatively if it is approached from the schizophrenic process. On the other hand, changes in certain patients in the course of organic functions correspond to changes in the psychograms; these changes are qualitative and discontinuous and must be interpreted as an invasion of the personality.—(Courtesy *Année psychol.*)

4176. Sklar, N. I. O psikhozakh pri zloupotreblenii anashei. (Concerning psychoses produced by misuse of anashà.) In Rokhlin, L. L., *Problemy Klinicheskoi i Eksperimentalnoi Nevropatologii i Psikhiatrii*. Kharkov: Ukr. Psikhonevrol. Akad., 1936. Pp. 280-285.—Acute and chronic psychopathological conditions are produced by the abuse of "anasha," a form of hashish. No characteristic features of the psychoses were found; in general they resemble those of the exogenous psychoses, with some cases similar to the endogenous ones, e.g. schizophrenia. Hereditary factors are less significant than economic ones in "anashism." French and English summaries.—L. J. Stone (Columbia).

4177. Slight, D. Disorganization in the individual and in society. *Amer. J. Sociol.*, 1937, 42, 840-847.—Man is dominated essentially by emotional forces. Neurosis is a failure of compromise between personal desires and the limitations imposed by society. Latent emotional imbalance is present in all and mass revolt is more rapidly aroused as centralization develops. Idealistic movements may contribute to

social disorganization by undue restriction and failure to provide alternative modes of expression. Society may well speed the means of noting and adjusting to changing ideas and demands. Education is confronted with the problem of assuring a minimum of emotional conflict in the individual.—(Courtesy *Amer. J. Sociol.*)

4178. Smith, A. P. The availability of facilities for negroes suffering from mental and nervous diseases. *J. Negro Educ.*, 1937, 6, 450-454.—About 97% of the 32,186 mentally ill negro patients are cared for in 251 of the 351 publicly or governmentally controlled institutions. The number of negro mental patients in private institutions is negligible, due to their economic status. The percentages of recovery or improvement are 10.34 in state hospitals, 14.87 in veterans' hospitals, and 57.61 in private institutions. There are few facilities for treating negro children. Generally speaking, about the same care is afforded the negro as the white patient in a state institution. Need for improvement for facilities available for negroes suffering from mental disease is in the direction of better medical service, preventive and therapeutic, an increase in the number of adequate hospitals and adequately trained personnel, and increased financial support among governmental and health agencies.—W. E. Walton (Nebraska).

4179. Stuerwald, R. E. Imagination: the power of progress. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 188-196.—The need for training of the imagination in the case of institutional children is especially great. The author describes the manner in which the imaginations of mentally deficient children are developed by means of creative school activities. These take the form of practical pursuits.—M. W. Kuensel (Children's Home, Cincinnati).

4180. Syz, H. The "social neurosis." *Amer. J. Sociol.*, 1937, 42, 895-897.—The author traces Trigant Burrow's formulation of and specific contributions to the principle of the "social neurosis."—E. D. Hunt (Brown).

4181. Tatarenko, N. P. Dalneishee nablyudenie "geredodegenerativnoi shizofrenii": kombinatsiya shizofrenii s tremor hereditarius. (Further observations on "heredo-degenerative schizophrenia": combined schizophrenia and tremor hereditarius.) In Rokhlin, L. L., *Problemy Klinicheskoi i Experimentalnoi Nevropatologii i Psikhiiatrii*. Kharkov: Ukr. Pikhonevrol. Akad., 1936. Pp. 286-291.—A description is offered of three cases which show a combination of schizophrenia and hereditary tremor (chronic chorea?). A familial tremor and association with schizophrenia indicate "congenital weakness of certain parts of the central nervous system." This would appear to favor Kleist's view of schizophrenia as a hereditary degenerative disease. The cases are not presented as decisive evidence, but to record a combination of diseases insufficiently considered in the Russian literature. English and French summaries.—L. J. Stone (Columbia).

4182. Thelmar, E. The maniac; a realistic study of madness from the maniac's point of view. New York: Amer. Psychical Inst., 1937. Pp. 279. \$2.00.—R. R. Willoughby (Brown).

4183. Trapp, C. E., & Trapp, M. C. Psychiatry in art. *Ann. med. Hist.*, 1936, 8, 511-517.—The authors trace the development of beliefs about the psychoses as represented by the artists of various periods. Thirteen figures are included.—D. J. Ingle (Mayo Foundation).

4184. Ushchenko, A. I. So called psychopathic or pathological characteristics (constitutional). *Med. Rec., N. Y.*, 1937, 145, 498.—In this concluding installment the author presents a discussion of the "evolutiogenetic" point of view in relation to the schizoid, cycloid, epileptoid, ambitoid or psychoasthenoid and hysteroid types of constitutional psychopathies and states that he feels the utilization of the evolutiogenetic method of study of the peculiarities of inheritance among psychopathic constitutions should serve greatly in the development of psychiatry.—M. H. Erickson (Eloise Hospital).

4185. Vaughn, C. L., & Hoose, E. S. Special abilities in a mentally deficient boy. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 197-207.—The educational problems presented by a 14-year-old colored mentally defective boy highly gifted in drawing and painting are described. Results on special tests "suggest the possibility that his art talent may be a combination of exceptionally good visual imagery, perhaps of the eidetic type, plus a fine manipulative ability." In educating him toward independent adjustment outside an institution special methods are required. His interests have been directed into work in a machine shop. Socialization is resulting.—M. W. Kuensel (Children's Home, Cincinnati).

4186. Vaux, C. L. Family care. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 82-88.—A New York institution caring for mental deficient now uses boarding-home care for certain types of cases. The method is successful both economically and from the standpoint of the benefits accruing to the patients themselves.—M. W. Kuensel (Children's Home, Cincinnati).

4187. Ward, L. B. Motor conflicts and transfer of training in high-grade mental defectives. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 50-59.—Bilateral transfer of training in mental deficient was investigated by means of maze learning. There were 24 subjects, each three being selected according to a threefold handedness classification. Data show that "Practice with one hand or limb does transfer to some extent to the opposite hand in mirrored form"; and that "The three handedness groups differ markedly both in amount of transfer to mazes of identical pattern and in amount to mazes of reversed pattern." When interpreting the results the author states, "While these results do not in any way prove the hypothesis that mirrored writing is caused by practice in direct writing by the opposite hand, they

do indicate that such *could* be the case with mentally deficient children who are either left-handed or ambidextrous. If this hypothesis be true, the results of this experiment would imply that left-handed children should show mirrored writing only with their left hands—which is largely borne out by the facts. On the other hand, children of mixed handedness might show mirrored writing with either hand. Finally, right-handed children should normally show little or no tendency toward mirrored writing."—*M. W. Kuenzel* (Children's Home, Cincinnati).

4188. Warkany, J., Frauenberger, G. S., & Mitchell, A. G. Heredofamilial deviations. 1. The Laurence-Moon-Biedl syndrome. *Amer. J. Dis. Child.*, 1937, 53, 455-470.—A syndrome complex consisting of feeble-mindedness, obesity, hypogenitalism, retinitis pigmentosa, and polydactylism has been described under the name of the Laurence-Moon-Biedl syndrome. Four cases are reported by the authors. The case reports of 102 patients who have been described by others are summarized. In only 24 cases within this group were all five of the so-called typical symptoms present. Feeble-mindedness was present in 64 of the 102 cases.—*D. J. Ingle* (Mayo Foundation).

4189. Whitfield, L. A. Segregation in the treatment of spastic patients. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 173-174.—Spastic children not only must learn to overcome their lack of motor control, but also must be taught to control their fears. Segregation of such patients from those cared for on institutional wards is needed to provide quiet, relaxation, and a sense of physical security. Segregation was found to promote progress both physically and mentally. Retesting for intelligence quotients showed a rise in each case under treatment of from 5 to 35 points.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4190. Williams, E. Y. The incidence of mental disease in the negro. *J. Negro Educ.*, 1937, 6, 377-398.—A review of the literature relative to the incidence, age, sex, types, economic status, environment (urban and rural), suicide and crime as related to mental disease indicate that no scientific criteria have been established which enable us to obtain reliable data. At present we glean a faith in the ability of the negro to survive and increase. However, certain trends are indicated: (1) The incidence of mental disease in the negro is slightly in excess of that in native-born whites. (2) The low economic level of the negro has forced him to struggle for a mere existence, thereby contributing little to civilization, "the price for all of this being a high incidence of crime, hunger, hate, deception and a high incidence of physical and mental disease." (3) The migrations of the negro from one state to another or from country to city have resulted in an increase in the number of mental cases. (4) The common mental ailments are dementia praecox, general paresis and cerebral lues. (5) There are no sex differences, but studies of age indicate that negroes

tend to be committed to institutions at an earlier age than do whites.—*W. E. Walton* (Nebraska).

4191. Wolfe, M. The extramural responsibility of the institution. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 131-136.—The institutional staff should assume certain responsibilities for those mental defectives who have not yet been able to be admitted to institutions for care and training. Selection of cases to be admitted is urged to prevent improper commitment. The major portion must adjust to community life. Social agencies must learn to differentiate between those needing temporary assistance and those requiring prolonged institutional care. After institutional training there should be means of paroling cases. Supervision of such cases by the institution must follow, at least for a time.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4192. Wolff, H. Gehäufte kleine Anfälle bei Jugendlichen und Erwachsenen. (Cumulative slight seizures in adolescents and adults.) *Nervenarzt*, 1937, 10, 258-262.—*P. L. Krieger* (Leipzig).

[See also abstracts 3968, 3981, 3985, 3997, 3998, 4051, 4123, 4210, 4260, 4270, 4326, 4341, 4359, 4372, 4385, 4387, 4392, 4400, 4408, 4414, 4416.]

PERSONALITY AND CHARACTER

4193. Argelander, A. The personal factor in judging human character. *Character & Pers.*, 1937, 5, 285-295.—The trait of character ascribed to a person depends upon the conditions under which his behavior is being observed, such as the following: (1) The observer usually knows the subject chiefly in a certain sphere of life—business, school, family or social circle; (2) the personal relations existing between the two (friendly, erotic, etc.) play an important part; (3) the behavior the judge adopts toward the subject conditions the behavior of the latter; (4) the personality of the judge is reflected in his judgment of others; (5) personality tends to be oversimplified in judging character because of incomplete observation; and (6) judgment of character is modified by the social status of the judge and the judged.—*M. O. Wilson* (Oklahoma).

4194. Baumgarten, F. Über die Möglichkeit der Charakterentwicklung. (Concerning the possibility of character development.) *Ethik*, 1937, 5, 2-6.—After reviewing the pros and cons as to the possibility of developing character in an individual, the author concludes that character can be changed through training or, as is often the case, through a catastrophe or unusual experience, e.g. Saul becomes Paul, or Tolstoy, the pleasure-seeker, suddenly becomes an ascetic. As a muscle becomes stronger through use, so characterological predispositions can be strengthened through use or inhibited through disuse. A hot-tempered person becomes more hot-tempered with each succeeding outburst of temper; less so with successive inhibition. A consideration of motives is an aid to self-restraint.—*G. F. J. Lehner* (Brown).

4195. Baumgarten, F., & Steiger, J. Ein Test zur Ermittlung der Interessen von Kindern und Erwachsenen. (A test of children's and adult interests.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 323-328.—The authors wished to devise a test which would permit the subject to state his interests spontaneously and completely. The proposed test consists of 438 book titles; the children are instructed to list the titles which appeal most. An advantage is that interests are tested indirectly and more completely than would be possible by direct questioning. Choices were often symptomatic and disclosed complexes hitherto unsuspected. No two lists of the 1500 collected were alike, but age factors disclosed several trends. Personality structures could be distinguished by noting whether the titles chosen belonged to one or more of the 18 fields represented in the complete list.—*H. Beaumont* (Kentucky).

4196. Benton, A. L., & Stone, I. R. Consistency of response to personality inventory items as a function of length of interval between test and retest. *J. soc. Psychol.*, 1937, 8, 143-146.—The consistency of response to the items in a personality inventory progressively decreased as the length of test-retest interval increased until the 4-day interval was reached. For intervals from 4 days to 21 days the consistency of response was maintained at a constant level. In the "zero" interval (retest given immediately after completion of initial test) 8% of the responses were changed upon retest. The suggestion is made that a standard test-retest interval of 7 days be adopted.—*E. D. Hunt* (Brown).

4197. Carmichael, L., Roberts, S. O., & Wessell, N. Y. A study of the judgment of manual expression as presented in still and motion pictures. *J. soc. Psychol.*, 1937, 8, 115-142.—Two experiments on the judgment of manual gestures are reported. The first study employed the projection of still photographs prepared as lantern slides; the second used a moving-picture camera. Judgments were obtained from 229 men and 119 women in the first experiment, and from 184 men and 108 women in the second. In both cases vocabulary was uncontrolled, except that single-word judgments were requested. Approximately 70% of the judgments from the still pictures and 72% of the judgments from the moving pictures were of a sufficient commonality to be useful in further study. The first, second, and third modal choices of the subjects were selected on the basis of commonality or agreement for each expression. No significant sex differences were found, nor were there significant differences between those subjects having dramatic experience and those not having such experience.—*E. D. Hunt* (Brown).

4198. Hamilton, G. V. Can personality be measured? *J. soc. Psychol.*, 1936, 7, 358-363.—Discussion from a psychoanalytic standpoint. The three Freudian systems of the id, ego and super-ego are defined, and dynamisms arising from the interaction of these systems, such as displacement, projection, and reaction-formation, are described.

It is suggested that measurements might be made of the strength of primary impulses, of individual differences in feeding and excretory functions in infants, and of adult manifestations of anal and oral tendencies. Experimental clarification of these concepts is welcomed.—*E. B. Newman* (Swarthmore).

4199. Humm, D. G. Outline for the analysis of temperament. Los Angeles: Author, 1937. Pp. 9. \$0.35.—The author presents an outline for the analysis of temperament based on Rosanoff's theory of personality. Individual traits tend to manifest themselves in five main groups or components. These are: the group of traits associated with rational balance and self-control, called the normal component; the group associated with self-interest and lack of consideration for others, called the hysteroid component; the group associated with fluctuations in feelings and activity, called the cycloid component; the group associated with imagination and lack of contact with reality, called the schizoid component; and the group associated with inspiration or urge toward achievement, called the epileptoid component. The cycloid component is divided into two phases, the depressive and the manic; and the schizoid component is divided into the autistic and paranoid phases. Every individual possesses all components in some degree; taken together they constitute the complete temperament. Differences in individuals occur on the basis of the relative strength of the various components.—*M. Keller* (Brown).

4200. Kendig, I., & Shevach, B. J. Studies in perseveration: I. A survey of researches in perseveration. *J. Psychol.*, 1937, 3, 223-230.—Three groups of investigators of perseveration are distinguished: (1) German psychologists interested mainly in the perseveration of words and nonsense syllables, (2) psychiatrists and psychologists seeking a relation between perseveration and certain reaction types, and (3) the English school dealing with the establishment and measurement of perseveration as a variable of personality. The term is shown to mean a tendency of ideas to spontaneous recurrence, sensory lag or after-effect, interference effects from preceding activities on present activities, and a tendency to continue working when there is no defined end. These phenomena are classified as continuance effects, recurrence effects, and fixation effects.—*J. McV. Hunt* (Brown).

4201. Kendig, I. Studies in perseveration: II. Determining factors in the development of compulsive activity. *J. Psychol.*, 1937, 3, 231-246.—This investigation indicates that accepting the task as a test, failure in the test, and an (optimal) "empty" interval of approximately 5 min. following performance are most conducive to subsequent compulsive perseveration of the task. A minimum of perseverative activity (and none of the compulsive variety) followed casual acceptance of the task. Amount of compulsive perseveration correlated positively with "obsessive" attitudes as measured

by an adaptation of Bernreuter's personality inventory. The task, given to 90 Radcliffe students, consisted of producing 30 words beginning with an assigned letter. Six sets of conditions prevailed: (a) casual task, test with success, test with failure, and (b) intervals of "empty" time following performance of 0, 5 min., and 30 min.—*J. McV. Hunt* (Brown).

4202. **Kendig, I. Studies in perseveration: III. The upper limen for perseveration and repetition.** *J. Psychol.*, 1937, 3, 247-251.—10 Radcliffe students reported compulsive perseveration of the task to approximately the same degree after producing words beginning with a specific letter for 3 hours as after producing 30 such words. This result is interpreted to indicate that compulsive perseveration is not a function of the length of time expended upon a task, of the amount of work done, or of the difficulty of the task.—*J. McV. Hunt* (Brown).

4203. **Kendig, I. Studies in perseveration: IV. Selective perseveration and repetition.** *J. Psychol.*, 1937, 3, 253-259.—40 Radcliffe students, tested in the production of words beginning with both C and S under experimental conditions of both success and failure, reported more perseverative activity for the letter on which they were made to fail. When the failed task was last this selective perseveration was further augmented.—*J. McV. Hunt* (Brown).

4204. **Kendig, I. Studies in perseveration: V. Theoretical significance of the perseveration and repetition of conative activity.** *J. Psychol.*, 1937, 3, 261-264.—A lower level of conative reactivation or perseveration, such as that which follows casual acceptance of the task, is without noticeable affect, and diminishes rapidly with time. This lower level is distinguished from perseveration of a compulsive character which is recurrent over a much longer time and has a marked affect. It is granted that such a conception as Holt's "circular response" may explain some aspects of perseverative phenomena, especially of the lower level, but an explanation in dynamic terms is indicated for most of the phenomena of compulsive character. The task is considered to set up tension (disequilibrium) which is not entirely dissipated during the performance. The performance simply serves to give the tension direction. Evidence from the experiments in the series is brought forward to support this theory.—*J. McV. Hunt* (Brown).

4205. **Lurie, W. A. A study of Spranger's value-types by the method of factor analysis.** *J. soc. Psychol.*, 1937, 8, 17-37.—To determine stable categories for the classification of personality with regard to value-types, a test with 144 items classed according to Spranger's system was administered to 203 university students. It was scored to yield four measures corresponding to each of Spranger's six types for each subject. Tetrachoric correlations were obtained, and a factor analysis was performed by Thurstone's centroid method. The orthogonal factorial matrix was subjected to a transformation maximizing the number of small entries, thus form-

ing a matrix of oblique coordinates in which 7 patterns stand out very clearly. The four basic attitudes were found to be: (1) the social type, (2) the Philistine type, (3) the theoretical type, and (4) the religious type.—*E. D. Hunt* (Brown).

4206. **Pai, T., Sung, S. M., & Hsü, E. H. The application of Thurstone's personality schedule to Chinese subjects.** *J. soc. Psychol.*, 1937, 8, 47-71.—The Thurstone personality schedule in Chinese translation was given orally and individually to 617 Chinese male subjects, including 127 medical patients, 224 neurological patients, 62 applicants for nonprofessional work, 101 mental patients, and 103 drug addicts. The mean score for all cases was 51.82. The score of the neurological patients was significantly higher than that of the medical patients, applicants, and addicts; the scores of the mental patients and those of the addicts and medical patients were higher than those of the applicants. When the subjects were regrouped according to their occupations, the scores of the student, teacher, and clerk groups were significantly higher than those of the coolie group. The schizophrenic group and psychopathic patients without demonstrable organic basis showed a higher score than that of the addicts and manic patients. The coefficient of contingency between clinical diagnosis and neurotic score was .47. A high proportion of similarity between the American and Chinese was found in the most diagnostic items.—*E. D. Hunt* (Brown).

4207. **Plant, J. Personality and the cultural pattern.** New York: Commonwealth Fund, 1937. Pp. 419. \$2.50.—Currents of environmental influence flow into the personality continuously and change personality. Plant believes that such environmental influences are artificially modifiable, and that this sort of modification is simpler than attempting to modify individual personality through direct psychiatric treatment. Psychiatrists should be responsible for knowing the ways in which the cultural pattern presses on the individual, and the ways in which the cultural pattern should be modified. These modifications are to be based on the needs of the individual discovered through clinical study of the "casual breakdown," the individual who presents a short and dramatic dislocation of his usual relationships in any given social institution because of specific stress. Study of such breakdowns, the writer states, reveals the pressures existing in ordinary life. The goal of this kind of mental-hygiene psychiatry is the development of an individual-centered society, the psychiatrist acting as catalytic agent, and the individuals in immediate contact with children in each social institution, especially the family, school, church, court, and industry, acting as therapeutic agents.—*E. Alpern* (Providence Child Guidance Clinic).

4208. **Rojas, N. Psicología del latero.** (Psychology of the chatterer.) *An. Soc. Psicol. B. Aires*, 1935, 1, 125-139.—Without taking into account pathological types, the author divides loquacious individuals into the following groups according to

temperament and morphological constitution: the hypersthenic, who is vigorous, optimistic, superficial, unstable, extraverted; the asthenic, who is pale, timid, soft-voiced; and the pyknic, who is short in stature, vain, pessimistic, malevolent towards others, and talks only of himself.—(Courtesy *Année psychol.*)

4209. Ruttman, W. J. *Die Beurteilung des Charakters in der Schule im Spiegel der Charakterkunde.* (The judgment of character in the school in the light of characterology.) Langensalza: Beyer, 1937. Pp. 56. M. 1.20.—R. R. Willoughby (Brown).

4210. Shlionsky, H., Preu, P. W., & Rose, M. *Clinical observations on the reactions of a group of transients to unemployment.* *J. soc. Psychol.*, 1937, 8, 73-85.—A psychiatric study was made of 200 unemployed men on relief at the Federal Transient Bureau of New Haven. 35% of the transients had been chronically maladjusted to their environment before the unemployment situation arose; chronic alcoholism was a common finding in this group. 90% reacted to the unemployment situation with disturbances of mood having the characteristics of a mild reactive depression. 30 individuals manifested the anxiety syndrome; 24 of these gave indications of personality maladjustment before the unemployment period began.—E. D. Hunt (Brown).

4211. Skawran, P. R. *Die sintetiese studie van die persoonlikheid.* (The synthetic study of personality.) *Publ. Univ. Pretoria*, 1936, 4, No. 3. Pp. 18.—The purpose of psychology is not primarily to study "man in general" or to discover general laws, but to investigate and describe the typical constitution of man and his functions. If all individuals were distributed on the surface of a globe, older psychology would have attempted to describe what it found in the center of that globe. Our attempt should be rather to indicate the exact position of each person on that globe, which means that we have determined his individual peculiarities in every respect (race, constitution, sex, etc.) and that, granted a known environment, we can predict his reactions. This necessitates a thorough study of typical reactions, typical forms of behavior and forms of life, and arranging these into a system which shows how they are related and how they differ.—H. Beaumont (Kentucky).

4212. Studencki, S. M. *Polskie Charakterologie.* (Study of characterology in Poland.) *Slav. Rdsch.*, 1935, 374-381.—Jaxa-Bykowski distinguishes between a sub-Nordic type, which is animated, ambitious, imaginative; a Dinaric type, which is essentially passive; and an Alpine type, which exerts itself when it wishes to excel. The author himself distinguishes between the Nordic type, which is depressive, introverted, cold, conservative, slow but exact; and the sub-Nordic type, which excels in general intelligence, mobility of attention, and psychophysical tempo, but is inferior in practical intelligence, manual aptitude and spatial imagination. Information is given on the Alpine,

pre-Slav and Lapp types and on certain regional differentiations.—(Courtesy *Année psychol.*)

4213. Wrenn, C. G., Ferguson, L. W., & Kennedy, J. L. *Intelligence level and personality.* *J. soc. Psychol.*, 1936, 7, 301-308.—Two criterion groups, selected from the upper five and lower fifteen percentiles of a junior college population tested for intelligence, are compared as to results on the Bernreuter personality inventory. Neurotic and introversion scores showed no differences. Both superior men and women were more self-sufficient (critical ratios of 6.6 and 7.7) and the inferior men were more dominant (critical ratio of 4.0). The possible relation of the results to a mechanism of compensation is suggested.—E. B. Newman (Swarthmore).

[See also abstracts 4057, 4088, 4126, 4127, 4163, 4169, 4175, 4237, 4244, 4247, 4250, 4257, 4370, 4388, 4392, 4398, 4406, 4414, 4415.]

GENERAL SOCIAL PROCESSES

(incl. Esthetics)

4214. Allen, E. H. *A selected annotated bibliography on the health education of the negro.* *J. Negro Educ.*, 1937, 6, 578-581.—A list of 58 titles of books, bulletins, pamphlets and periodical references with annotations including: Allen, The negro's religion and its effects upon the recreational activities in Bladen County, North Carolina; Bayton, Personality traits of negro college students; Borman, A comparison of personality traits in Summer High School, Kansas City, Kansas; Clark, The attitude of negro college students toward their parents; Eason, An analysis of the social attitudes and causal factors of negro problem boys of the Los Angeles city schools; Eppo, A comparative study of motor skills of high school, college and university negro boys; Gross, Case studies of fifty delinquent negro boys of Stowe School; Hilliard, Juvenile delinquency among negroes in Houston, Texas; Lacaze, The organization and administration of extracurricular activities in high schools for negroes in New Orleans; Taylor, Broken homes as a factor in maladjustment in delinquent negro boys in Los Angeles; Wright, The predictive value of the psychological examination as a guide to academic success; Young, A study of the mental and physical traits of negro children in the Fields special school. The editor adds 174 titles compiled from references submitted by contributors to the Yearbook.—W. E. Walton (Nebraska).

4215. Ayer, A. J. *Language, truth and logic.* Oxford: Ryerson Press, 1936. Pp. 254. \$2.00.—R. R. Willoughby (Brown).

4216. Bierens de Haan, J. A. *Physiologische und psychologische Unterschiede zwischen Tier- und Menschengesprache.* (Physiological and psychological differences between animal and human speech.) *Arch. néerl. Phon.*, 1933, 8-9, 1-7.—Animal speech, considered in the narrower sense of articulated vocal intercourse, differs from human speech in one important respect—animals have no words. An

utterance or cry, to be a word, must (1) be articulated, as in human speech, and (2) have a conventional meaning. Animal cries, whether of those free or in captivity, are not articulated, nor do the cries carry meanings other than possible indications of emotional states. In the latter instance they are often erroneously designated as "warnings" or "calls." The vocal expression of some animals, e.g. parrot, can be modified by association with human beings, but it is improbable that words so acquired have conventional meaning, i.e., a parrot who says "come in" to a knocking at the door may not wish to see anyone enter. In a few cases, however, such a desire may be present. This is probably the highest stage animal speech will reach.—G. F. J. Lehner (Brown).

4217. Bryngelson, B., & Rutherford, B. A comparative study of laterality of stutterers and non-stutterers. *J. Speech Disorders*, 1937, 2, 15-16.—The authors present statistical data from 74 stutterers and 74 non-stutterers showing the histories of handedness. They show "4 times as much ambidexterity in the stuttering group as in the control group, and approximately 8 times as much shifting of handedness is experienced by the stutterers."—C. V. Hudgins (Oberlin).

4218. Burks, F. W. The relation of social intelligence test scores to ratings of social traits. *J. soc. Psychol.*, 1937, 8, 146-153.—Results based on the study of 50 Stanford University women indicate that there is no significant relationship between scores on the George Washington social intelligence test and composite ratings by sorority sisters on the following social traits: social prestige, social knowledge, social desire, and ability to inspire affection.—E. D. Hunt (Brown).

4219. Butterfield, O. M. Sex life in marriage. New York: Emerson Books, Inc., 1937. Pp. 192. \$2.00.—R. R. Willoughby (Brown).

4220. Byrns, R. Intelligence and nationality of Wisconsin school children. *J. soc. Psychol.*, 1936, 7, 455-470.—Important data are presented showing the relative ranking of children of 30 different nationalities found with sufficient frequency among 133,289 Wisconsin high school pupils tested for intelligence. Of the total group, 78,560 reported both parents of the same nationality. Scores for these children ranked Jewish, Irish, Danish, Hungarian, Dutch, Scotch and American nationalities in this order at the top; Norwegian, English, Bohemian, Greek, Swiss, Slavic, Belgian, Polish, French, negro, Syrian and Italian in descending order at the bottom. Differences of rank of about two places at the upper and lower ends and of about ten places in the middle were significant. Compared with the army groups the extreme nationalities were about the same with the exception of the English. This group, however, showed more overlapping on the part of different nationalities than the army group. The results are probably significant for the foreign-born population of Wisconsin. Factors of language and schooling have

been fairly successfully equalized, but selective factors in migration necessarily make genuine racial comparisons unreliable.—E. B. Newman (Swarthmore).

4221. Carmena, M. Schreibdruck bei Zwillingen. (The degree of handwriting pressure in twins.) *Z. ges. Neurol. Psychiat.*, 1935, 103, 744-752.—The writer measured handwriting pressure in 50 pairs of twins, 29 of whom were uni-ovular (13 pairs of boys and 16 of girls) and 21 bi-ovular (8 pairs of boys, 7 of girls, and 6 of different sex). The age range was from 14 to 30 years, but most of the subjects were between the ages of 18 and 30. All the twins, except those of different sex, attended the same school. The measurement was made with Krapelin's scale, following Enke's technique. The author tabulated the results in three groups: great resemblance between the members of a pair, average resemblance, and no resemblance. Most of the uni-ovular twins, especially the boys, fall in the first group, some of the girls in the second group. The bi-ovular twins fall in the third group. The resemblance in the first group was very clear, even though the methods used might be different. From the results the author concludes that degree of handwriting pressure depends upon hereditary factors.—(Courtesy *Année psychol.*)

4222. Crawford, M. P. The cooperative solving of problems by young chimpanzees. *Comp. Psychol. Monogr.*, 1937, 14, No. 68. Pp. 88.—Chimpanzees were trained to pull in, by means of a rope, a box containing food. After each chimpanzee had learned to pull it in alone, the box was made too heavy for a single animal. Two ropes were attached and the chimpanzees were paired. They were taught to pull in unison and thus to draw in the heavy box. Pulling was initially uncoordinated. By helping and by giving the command "pull" at appropriate times, the investigator eventually got the animals to pull together. After such tuition the chimpanzees began to watch each other and to coordinate their pulling without help or commands from the experimenter. Finally one animal actively solicited the help of the other. Vocal and manual gestures were involved in solicitation. As communication, soliciting had merely a signalling function. It did not indicate the nature of the task to be done. It appeared to be comparable with the plea "Do something for me." The author points out that the gestures had no directive meaning beyond their spatial orientation in the given situation. Bibliography.—N. L. Munn (Peabody).

4223. Demessieur, R. Die Ursachen des Stotterns und ihre systematische Bekämpfung. (The causes of stuttering and their systematic therapy.) Magdeburg [-W., Ebendorfer Str. 4]: Author, 1936. RM. 10.80.—R. R. Willoughby (Brown).

4224. Eggan, F. [Ed.] Social anthropology of North American tribes: essays in social organization, law, and religion. Chicago: Univ. Chicago Press, 1937. Pp. 473. \$3.00.—R. R. Willoughby (Brown).

4225. Evans-Pritchard, E. E. *Witchcraft, oracles and magic among the Azande*. New York: Oxford Univ. Press, 1937. Pp. 584. \$7.50.—R. R. Willoughby (Brown).

4226. Finger, O. *Studien an zwei asozialen Zigeunermischlings-Sippen*. (Studies on two asocial gypsy-hybrid stocks.) Giessen: J. Christ, 1937. Pp. 67. RM. 2.50.—R. R. Willoughby (Brown).

4227. Folsom, J. K., & Morgan, C. M. *The social adjustment of 381 recipients of old age allowances*. *Amer. sociol. Rev.*, 1937, 2, 223-229.—381 recipients of old age allowances in New York state, all 70 years of age or older, were interviewed by social workers, and their answers to 76 questions were recorded. The subjects were divided in three ways: men versus women, upstate versus mixed culture, and according to reported degree of happiness or adjustment. Frequency of certain responses for the various groups, and some sample responses, are reported under the headings of social and populational characteristics, health, education, family relationships, social relationships outside the family, religion, employment and work, recreation, and general emotional attitude. An attempt is made to determine the relation of these factors to general happiness or adjustment.—I. L. Child (Yale).

4228. Foster, J. E. *The group in terms of propaganda*. *Amer. sociol. Rev.*, 1937, 2, 247-252.—Sociologists commonly conceive of groups as formal organizations. The propagandist, however, deals with groups which may be defined simply as "collections of individuals who: (1) are susceptible to contact through a common medium or common media; (2) have a common attitude (or common attitudes); (3) have potential focal points of universal attention; and (4) interact (actually or potentially)." Implications of this definition are elaborated. Emphasis is placed upon the close interrelation among groups, and the overlapping of membership, as of prime importance in the process of change of public opinion.—I. L. Child (Yale).

4229. Gierlich, W. *Zur Natur- und Sozialgeschichte des "gang."* (The natural and social history of the gang.) *Krim. Mh.*, 1937, 11, 1-9.—A description taken from the American literature.—M. E. Morse (Baltimore).

4230. Gosnell, H. F., & Schmidt, M. J. *Factorial analysis of the relation of the press to voting in Chicago*. *J. soc. Psychol.*, 1936, 7, 375-385.—The vote in each of 47 local areas in Chicago for local and national candidates in the primary and general elections of 1930-32 was compared with the home circulation of the four leading daily papers as well as with several other political or quasi-economic factors. The resulting correlational matrix was analyzed by means of Thurstone's factor-analysis technique, revealing four factors which accounted for the major portion of the indicated relationships. These factors might be the traditional Republican vote on national issues, local Thompson sentiment, etc. The writers argue that the significant loadings for the circulation of the four newspapers on certain

of the factors give evidence for their influence on the actual result in the vote cast. The method is held to be a valuable tool in such sociological analysis.—E. B. Newman (Swarthmore).

4231. Hartmann, G. W. *The contradiction between the feeling tone of political party names and public response to their platforms*. *J. soc. Psychol.*, 1936, 7, 336-357.—20 statements, half expressing conservative beliefs and half expressing collectivist beliefs, were presented individually to 168 voters in a rural district. 55% of the total answers favored a collectivist view. Affective ratings on a list of 22 party names were then obtained. Some responses were strikingly "institutionalized." Indifferent or fictitious names showed symmetrical uni-modal distributions; familiar names gave typical J-curves, favorable in the case of Republican, Democratic, Farmer-Labor, etc., and unfavorable for Communist, Technocratic, etc. The name Socialist showed a sharply bi-modal distribution, the start of an institutionalized attitude. The author holds that emotional factors are revealed which give rise to contradictory attitudes and behavior.—E. B. Newman (Swarthmore).

4232. Hayes, S. P., Jr. *Occupational and sex differences in political attitudes*. *J. soc. Psychol.*, 1937, 8, 87-113.—An analysis of information on a questionnaire, presented in interviews by members of the National League of Women Voters to 8419 voters during the two weeks preceding the presidential election of 1932, was made to determine the relationship of occupational level and sex to differences in attitudes towards political issues. Occupational differences in political attitudes were found to be relatively small. The few attitudinal differences that did appear seemed to show a gradation of sentiment down through the several divisions of the occupational hierarchy, with no sharp dichotomy between any group with a "capitalist" ideology and any other group with a "labor" ideology. The few significant sex differences showed the women to be more socialistic and more internationalistic than the men.—E. D. Hunt (Brown).

4233. Herzog, E. G. *A questionnaire on etiquette*. *J. soc. Psychol.*, 1936, 7, 259-288.—A discussion of the nature and function of etiquette in society.—E. B. Newman (Swarthmore).

4234. Johnson, W., & Knott, J. R. *Studies in the psychology of stuttering: I. The distribution of moments of stuttering in successive readings of the same materials*. *J. Speech Disorders*, 1937, 2, 17-19.—21 stutterers read a passage of 180 words two or more times in a single setting. 72% of the words which gave trouble in the second reading were words also stuttered during the first reading. "These findings show that to a marked degree moments of stuttering are distributed in a non-random order among words spoken. . . . It would seem reasonable to account for this fact by assuming that at these loci there are stimuli to which the stutterer reacts, and that his reactions either precipitate, or are, the stuttering which results."—C. V. Hudgins (Oberlin).

4235. Johnson, W., Larson, R. P., & Knott, J. R. **Studies in the psychology of stuttering: III. Certain objective cues related to the precipitation of moments of stuttering.** *J. Speech Disorders*, 1937, 2, 23-25.—To test the hypothesis that stuttering is precipitated by certain cues resident in the situation as perceived by the stutterer, stutterers were required to read 100 words written on "cue sheets" containing visual or content cues, and "control sheets" containing the same material but without the cues. The material was read in the following four situations: (1) to the experimenter alone; (2) to an audience of 30 people; (3) to the experimenter immediately after; and (4) to the experimenter 24 hours after the audience situation. The results show, first, a greater incidence of stuttering in the audience situations, and second, a greater incidence of stuttering in the post-audience situations when the subjects read from the "cue sheets." "When a cue associated with a relatively greater incidence of stuttering is introduced into what was previously a 'non-difficult' situation, there is a statistically significant increase in the frequency of stuttering in the latter situation."—C. V. Hudgins (Oberlin).

4236. Kern, A., & Kern, E. **Lesen und Lesenlernen.** (Reading and learning to read.) Freiburg: Herder, 1937. Pp. 159. M. 3.80.—R. R. Willoughby (Brown).

4237. Kirkpatrick, C. **The construction of a belief-pattern scale for measuring attitudes toward feminism.** *J. soc. Psychol.*, 1936, 7, 421-437.—The author describes the construction of an attitude scale for feminism by what he believes to be an improved method. The general attitude is analyzed logically into 40 issues, grouped 10 under each of 4 categories. Two statements are chosen by a number of judges to represent opposing views on each of these issues. The person taking the test checks those items with which he can agree. Scores represent the number of positive items (feminist) checked minus the number of negative items checked. One form of the test is presented without giving justification for the items selected. This is published elsewhere. High reliability is indicated for three forms of the test which, when intercorrelated, yielded indices of .89, .94 and .90.—E. B. Newman (Swarthmore).

4238. Knott, J. R., Johnson, W., & Webster, M. J. **Studies in the psychology of stuttering: III. A quantitative evaluation of expectation of stuttering in relation to the occurrence of stuttering.** *J. Speech Disorders*, 1937, 2, 20-22.—In a test of the hypothesis that expectation of stuttering is one of the psychological factors related to the precipitation of the moment of stuttering 22 adult stutterers served as subjects. The results show that in the experienced group of subjects 88% of the words on which stuttering was expected were stuttered, while only 0.4% of the words on which stuttering was not anticipated gave trouble.—C. V. Hudgins (Oberlin).

4239. Kroh, O. **Deutsches Menschentum.** (German humanity.) *Z. pädag. Psychol.*, 1937, 38, 113-138.—The special situation of the German people

is due to their racial composition and psychological make-up. They are preoccupied with their nature and destiny because they have not yet "found the way to themselves," although Hitler has pointed it out. The German nature cannot be understood by other races. Its manifold Anlagen are expressed in an infinite variety of creations in all spheres. Hence the German feels the weight of the world's unfulfilled tasks. His peculiar virtues are a non-rational internal activation of psychic life, consciousness of reserve strength to master every fate, a need for genuineness, eternal youthfulness with its urge toward the future, a characteristically dynamic "becoming," an idealistic world-view and simultaneous realism, a heroic conception of honor through loyalty, which he protects by belligerence, fidelity to duty, a life of struggle and a contempt for safety, a racially determined courage, and a free spirit. The greatest danger to German humanity is individualism.—M. E. Morse (Baltimore).

4240. Lorge, I., & Curtiss, C. C. **Prestige, suggestion, and attitudes.** *J. soc. Psychol.*, 1936, 7, 386-402.—Well-known persons and their opinions were rated by a group of people in terms of their respect or lack of respect for the person involved. Quotations from statements on economic issues were presented three days later accompanied by the true and one false name from the first list. Further, the subjects indicated their agreement with the sense of the quotation. Finally, the quotations with their true source indicated were presented several weeks later for another rating. High regard for the source of a quotation, as shown by Test I, was found in Test III to raise the rating on a quotation which had been ascribed to a less favored source on Test II. The reverse process, a lowering on Test III, did not take place consistently.—E. B. Newman (Swarthmore).

4241. Mangus, A. H. **Relationships between the young woman's conception of her intimate male associates and of her ideal husband.** *J. soc. Psychol.*, 1936, 7, 403-420.—700 college women rated at one time their fathers, other close male relatives, male friends and ideal mates for such characteristics as interests, roles and personality traits. When evaluated by a contingency technique, the results showed that the ideal mate resembled the male friend more closely than either father or other male relative. Thus there is no evidence for the general operation of a Freudian mechanism such as the Elektra-complex.—E. B. Newman (Swarthmore).

4242. May, M. A. **A research note on co-operative and competitive behavior.** *Amer. J. Sociol.*, 1937, 42, 887-891.—The author discusses the work of a subcommittee of the Social Science Research Council which has during the past two years focused its attention on research on co-operation and competition, made an examination of pertinent literature, summarized the apparent results in terms of knowledge, and suggested a number of research problems designed to test previous results. The material has been prepared for publication by the

author and Leonard Doob, and published as a bulletin of the Council under the title *Research on Competition and Cooperation*.—E. D. Hunt (Brown).

4243. McMahan, G. Social growth; a study of the ecologic, psychologic, economic and sociopolitical development of human society. New York: Galleon Press, 1937. Pp. 154. \$2.00.—R. R. Willoughby (Brown).

4244. Nadel, S. F. The typological approach to culture. *Character & Pers.*, 1937, 5, 267-284.—The study of culture has been approached historically and sociologically. The author raises the question whether it should not also be studied from the standpoint of typology, and reviews three books which employ the latter approach: (1) Benedict's *Pattern of Culture*; (2) Mead's *Sex and Temperament*; (3) Bateson's *Naven*.—M. O. Wilson (Oklahoma).

4245. Newstetter, W. I. An experiment in the defining and measuring of group adjustment. *Amer. sociol. Rev.*, 1937, 2, 230-236.—This article describes briefly procedures and results to be reported at greater length later. Working with small groups, mostly in a boys' camp, short questionnaires about preferred associates among the members of the group were filled out by each member of the group at weekly intervals. The actual frequency of compresence of each possible pair of individuals within the group was also recorded. The mean correlation between measures derived in these two ways was .727. Measures of group status, obtained by the first technique, were also correlated with a scale of cordiality and conflict; it appeared that "an individual's group status was largely revealed by cordial behavior received from others, and was not largely determined (except in extremes of the range) by his behavior toward others in terms of cordiality and conflict. This is the most devastating evidence to date that interactions (social behavior) are not the results of measurable 'traits'." It is suggested that the best way to study an individual may be not to study his behavior but to study the behavior of others toward him.—I. L. Child (Yale).

4246. Pear, T. H. Religion and contemporary psychology. (Riddell memorial lectures.) London: Oxford Univ. Press, 1937. Pp. 51. 2s. 6d.—In a series of three lectures the author discusses "the sense of reality," "conscience and moral behaviour," and "personal relationships" as they relate to religion and psychology. To a psychologist "reality" may mean very different things; objects perceived through the senses, memory images, desires and needs are all psychically real. When we inquire into the nature of conscience, it seems that every human being has some standard of conduct which he will not lightly break. The standards are not merely sets of rules but are the result of a succession of moral choices between ideas of ourselves as being one sort of person rather than another. These pictures of ourselves are derived partly from our parents in childhood, partly from all the human relationships into which we enter. The attitude of the Christian church toward personal relationships and their con-

comitant class feeling are discussed in the last lecture.—E. D. Hunt (Brown).

4247. Pintner, R., & Forlano, G. The influence of attitude upon scaling of attitude items. *J. soc. Psychol.*, 1937, 8, 39-45.—To learn whether the attitude of the judge distorts his judgment, the authors administered the Thiele-Thurstone scale for the measurement of patriotism to 411 students in several classes in educational psychology, asking the students to act as judges and sort the statements into 11 categories immediately after the test proper. The total group was divided into an upper group of 27%, a middle group of 46%, and a lower group of 27%, according to the scores on the total test. There was very little difference between the scale values assigned by any of the groups and those derived by Thiele and Thurstone. The correlations of the ranking of the items among the three groups were: between the lower and middle groups, .994; between the lower and upper, .983; between the middle and upper, .983.—E. D. Hunt (Brown).

4248. Ritter, R. Ein Menschenschlag. (A human stock.) Leipzig: Thieme, 1937. Pp. 115. RM. 6.80.—The book is subtitled: A medical and historical study of ten generations of vagabonds, rogues, and robbers. A study of the forbears of tramps revealed a direct line of two to three hundred years of vagabonds, thieves, rogues, etc. who in earlier times belonged to organized robber bands. This indicates an entire stock of "asocial psychopaths," and unearths important facts bearing upon pedagogy, sociology, psychiatry, race hygiene, etc.—G. F. J. Lehner (Brown).

4249. Rombach, J. Untersuchungen über den tatsächlichen Ablauf des Lesenlernens im ganzheitlichen Verfahren. (Studies on the actual course of learning to read by the total method.) *Z. pädag. Psychol.*, 1937, 38, 150-157.—Rombach discusses content, color, position, word form and category, and text pattern in the total method, types of readers, and variations of attitude in the first phase of synthetic reading and methods of dealing with them. The total method accords with the physiological development of speech and is adapted to the great majority of children, who transfer smoothly to the synthetic method. The strongest proof of its suitability is the child's activity and initiative in passing through its phases. Some highly endowed mature children progress faster with the synthetic method from the beginning. Immature children remain long in the total stage, and many moderately endowed children do remarkably well in it but have difficulty in advancing to the synthetic stage because of deficient sound analysis.—M. E. Morss (Baltimore).

4250. Rosander, A. C. An attitude scale based upon behavior situations. *J. soc. Psychol.*, 1937, 8, 3-16.—Short statements of experiences peculiar to some social object or condition, that is, behavior situations as contrasted with statements of opinion, are employed as the scale elements in the formation of a new attitude scale. The social equality of

negroes and whites was selected as the attitude variable. Corrected correlations between behavior scores and opinion scores for 98 northern and 88 southern students were: .891 (Scale IA) and .812 (Scale IB), and .684 (Scale IIA) and .813 (Scale IIB) for each group. The author concludes that "the behavior scale is so much more specific one obtains a sharper picture of an individual's attitude pattern toward the negro than he obtains from the more or less general statements of opinion which appear in the opinion type scale."—*E. D. Hunt* (Brown).

4251. Schröder, C. M. *Rasse und Religion*. (Race and religion.) Munich: Reinhardt, 1937. Pp. 312.—The only two essential psychological phenomena of religion are mysticism and prophecy, and they are common to all religions. Hence religion can never be a product or function of any one race. Nordic piety has no special peculiarities.—*P. L. Krieger* (Leipzig).

4252. Sheffield, A. E. *Social insight in case situations*. New York: Appleton-Century, 1937. Pp. 296. \$2.25.—*R. R. Willoughby* (Brown).

4253. Skinner, B. F. *The distribution of associated words*. *Psychol. Rec.*, 1937, 1, 71-76.—The "standard curve of distribution" (a relation between the frequency of a word and its rank such that a straight line is obtained on logarithmic paper) is shown to hold for words selected on a semantic basis. The Kent-Rosanoff list was used as a basis for selection. The analysis showed that "for the 75 words having the strongest first associations in the K-R list, the frequency (f) with which a given association will occur in 1000 responses may be determined from its rank (R) according to the relation $f = \frac{300}{R^{1.39}}$."—*J. McV. Hunt* (Brown).

4254. Sloane, P. *Direct treatment in social case work*. *Amer. J. Orthopsychiat.*, 1937, 7, 182-183.—A differentiation of certain areas of treatment in which the social case worker can function is presented. The author further depicts direct treatment in case work which in his opinion the well qualified social worker can carry under the guidance of a psychiatrist, listing as safeguards to this procedure (1) that the application of this method be limited to a selected group of cases, which in turn implies careful diagnosis, and (2) that the social worker maintain continual consultation with the psychiatrist for clarification of diagnosis and for guidance in treatment, particularly at those points where movement is obstructed.—*E. D. Hunt* (Brown).

4255. Sorokin, P. A. *Social and cultural dynamics*. (3 vol.) *Fluctuation of forms of art. Fluctuation of systems of truth, ethics, and law. Fluctuations of social relationships, war, and revolution*. New York: American Book, 1937. Pp. xxi + 745; xvii + 727; xvii + 636. \$5.00 per vol.—This work represents the author's attempt to understand the character of contemporary culture and society. It traces through all the important categories of culture the evidences of the ideational or

sensate systems and the various mixtures to see whether there is any consistency of movement within a culture. No part of our civilization has been overlooked.—*F. A. Mote, Jr.* (Brown).

4256. Stagner, R. *Fascist attitudes: an exploratory study*. *J. soc. Psychol.*, 1936, 7, 309-319.—A questionnaire was devised by choosing statements from current newspaper editorials or by constructing statements which the author felt represented the core of German or Italian fascism. The list was given to 224 college students with true-false instructions. Results on individual items showed that the pro-fascist student neither favored a totalitarian state nor was conscious of middle-class interests. Rather he felt antagonistic to liberal or radical measures favoring the lower classes, and was nationalistic in sympathies. The statistical reliability of the original scale was not high.—*E. B. Newman* (Swarthmore).

4257. Stagner, R. *Fascist attitudes: their determining conditions*. *J. soc. Psychol.*, 1936, 7, 438-454.—18 of the best items from the preliminary scale for fascist attitudes previously described were mixed with 18 buffer items for use in the present study. Items were weighted for diagnostic value in scoring. 200 students and 400 adults filled in the accompanying questionnaire as well as the scales. Significant age, sex, and intelligence factors were not found. Among the economic factors, a curvilinear relation between family income and fascism was found, the greatest liberalism occurring among members of families receiving \$1000 to \$2000 per year. Occupational differences were in many cases marked and in the expected direction, politicians and shop-keepers contrasting with professional people and some manual laborers. Political preferences for presidential candidates showed a marked relation to the measured attitude. Disapproval of Nazi Germany was so widespread that no relation to fascism was found, but approval of Soviet Russia directly followed liberal attitudes. The author warns against the danger of measuring stereotypes to which particular emotional values have been attached.—*E. B. Newman* (Swarthmore).

4258. Steer, M. D. *Symptomatology of young stutterers*. *J. Speech Disorders*, 1937, 2, 1-13.—The purpose of this paper is to determine whether or not child stutterers present the same type of stuttering symptoms as do adults who have long established habits of stuttering. 67 child stutterers between the ages of 3 and 13 years and 20 non-stuttering children between the ages of 3 and 5 years were tested for the following symptoms: (1) malfunctioning of the respiratory system; (2) vocal anomalies; and (3) action-current dysintegrations. The results show that both groups of children show all three types of symptoms, with very slight differences between the stutterers and non-stutterers. The author concludes that either: (1) children do not stutter; (2) most children do stutter; or (3) the symptoms accepted as characteristic of stuttering in adults do not discriminate stuttering and non-

stuttering children at this age level. The author favors the second position.—*C. V. Hudgins* (Oberlin).

4259. Stern, H. [Therapy of disturbances of speech and voice.] *Msschr. Ohrenheilk.*, 1935, 69, 813.—(Courtesy *Child Developm. Abstr.*)

4260. Sullivan, H. S. A note on the implications of psychiatry, the study of interpersonal relations, for investigations in the social sciences. *Amer. J. Sociol.*, 1937, 42, 848-861.—The collection of data in social science inquiries is specifically complicated by certain factors inhering in the personality of the investigator. These factors are identical with a major preoccupation of the psychiatrist. This article undertakes to indicate the character of these complicating factors, their effects on inquiry, and the path along which their influence may be minimized or removed.—(Courtesy *Amer. J. Sociol.*)

4261. Thurnwald, R. C. The spell of limited possibilities: a contribution to an analysis of the mechanism of culture. *Amer. sociol. Rev.*, 1937, 2, 195-203.—The influence on culture and cultural changes of limitations arising from biological conditions, psychological conditions, social life, and geographical conditions, is briefly discussed.—*I. L. Child* (Yale).

4262. Valentine, C. W. La psychologie génétique du rire. (The genetic psychology of laughter.) *J. Psychol. norm. path.*, 1936, 33, 641-673.—After enumerating several of the well-known theories of laughter, the author discusses the beginnings of laughter in earliest childhood and the different types of laughter in children and adults. He concludes that any single explanation of laughter is not appropriate. A complete explanation would include at least the following points: (1) Laughter arises as the first expression of intense pleasure; it has certain physiological values. (2) Laughter has biological value for the baby. (3) In the adult, especially, it has important social value. (4) There seems to be a relation between the amount of energy released and the intensity of the laughter. (5) Sex jokes or jokes about people we dislike provoke considerable laughter because there is much energy to be released. (6) Laughter often plays another role; for instance, the nervous laugh in a dangerous situation inhibits not only the expression but also the feeling of fear. (7) Laughter can be due to combinations of many of the causes discussed.—*R. E. Perl* (New York City).

4263. Wähler, M. Der Deutsche Volkscharakter. (The character of the German people.) Jena: Diederichs, 1937. Pp. 559.—This book, consisting of 36 contributions of leading German investigators, is the first comprehensive study of the essential nature of the German racial strains.—*P. L. Krieger* (Leipzig).

4264. Wilson, G. Record keeping in group work a contribution to sociology. *Amer. sociol. Rev.*, 1937, 2, 237-246.—Discussion of the techniques and of the utility of making records of behavior of people in organized groups.—*I. L. Child* (Yale).

[See also abstracts 3955, 3978, 3985, 4027, 4039, 4114, 4115, 4128, 4130, 4133, 4147, 4170, 4177, 4178, 4180, 4190, 4206, 4207, 4210, 4268, 4271, 4281, 4327, 4332, 4337, 4358, 4370, 4386, 4388, 4398, 4404, 4407, 4416.]

CRIME AND DELINQUENCY

4265. [Anon.] Polygraph als Beweismittel zugelassen. (Polygraph records admitted as evidence.) *Arch. Krim.*, 1937, 100, 217.—Records made with the Keeler polygraph by L. Keeler, director of the Laboratory of Scientific Criminology, Chicago, were recently admitted as evidence by a Wisconsin court in a trial for assault with intent to kill. The records were used to strengthen the case against the accused, and not as the only or as absolute proof. The defendants were found guilty.—*M. E. Morse* (Baltimore).

4266. Berman, N., & Burgess, E. W. The development of criminological research in the Soviet Union. *Amer. sociol. Rev.*, 1937, 2, 213-222.—A brief survey of the general conception of crime, of methods of handling criminals, of the organization and work of criminological research institutes, and of criminological publications. Disputes about methodology and interpretation, arising from the Marxist emphasis, are discussed.—*I. L. Child* (Yale).

4267. Cantor, N. Recent tendencies in criminological research in Germany. *J. crim. Law Criminol.*, 1937, 27, 782-793.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4268. Fendrick, P. Language of institutional delinquents. *Res. Stud. St. Coll. Wash.*, 1937, 1, 17-21.—The author has collected representative samples of delinquent jargon while observing diverse activities of delinquent boys in a New York state reform school. Early in the criminal's career verbal differentiation and specialization are noted. It is the author's opinion that this vernacular tends to undo much of the paternal influence which is assumed by society through the medium of the reform school.—*F. A. Mote, Jr.* (Brown).

4269. Gillin, J. L. Backgrounds of prisoners in the Wisconsin state prison and of their brothers. *Amer. sociol. Rev.*, 1937, 2, 204-212.—Data on the backgrounds of 172 prisoners and on their non-delinquent brothers were obtained by interview (with additional sources of information for the prisoners). Incidence of various items is compared for these two groups, and to some extent for the subgroups obtained by classifying prisoners according to type of offense. "Three significant sets of factors in the background stand out—(1) the emotional tone apparently developed during childhood, (2) the work record, including age at which a full-time job was obtained and steadiness on the job, and (3) relationships with the wife, if married." The prisoners "show greater departures from the accepted pattern of conduct, aside from delinquency, than their brothers. . . . The data with regard to their

feeling of favoritism and their affection for the mother suggest the possibility that early in their lives these prisoners developed a self-centeredness which did not make for social stability."—*I. L. Child* (Yale).

4270. Glanville, A. D. Psychometric patterns in industrial school boys. *Delaware St. med. J.*, 1937, 9, 11-14.—30 industrial school boys were studied with respect to their scores on verbal and performance tests. The results indicate that the incidence of mental deficiency among delinquents is not as great as was once believed. A large percentage of the boys studied were retarded in their language development far below the level of their native intelligence. "Language retardation as one of the important causes of delinquency is suggested as being of significance in this study."—*M. Keller* (Brown).

4271. Hersch, L. Complementary data on Jewish delinquency in Poland. *J. crim. Law Criminol.*, 1937, 27, 857-873.—A continuation of the author's previous article (see XI: 1899). The possibility of constructing a "general ratio of penalty" to compare various groups of a population is discussed.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4272. Kephart, N. C. Some changes in delinquents during institutional commitment. *J. juv. Res.*, 1937, 21, 67-76.—Delinquent boys 10 to 21 years of age were studied by Luria's association-motor modification of the familiar association test and by Moreno's sociometric measurements. 47 boys were tested by the Luria association-motor test on entrance to the institution and again after having spent six months in the institution. These two sets of results were compared with similar ones obtained on 50 boys who had been incarcerated twelve to eighteen months. Statistically reliable differences were found "In the direction of a state more characteristic of the psychoneurotic . . . also in the direction of a state more characteristic of the delinquent." The results of the Moreno test seem to indicate that "delinquents tend to maintain their social orientations outside the arbitrary group represented by the institution, though less so with greater length of stay." 11 references are cited in the bibliography.—*F. M. Teagarden* (Pittsburgh).

4273. Kinberg, O. Publicitet och samhällsätgärder till skydd för och mot abnorma kriminella. (Publicity and social measures for and against abnormal criminals.) *Svenska Läkartidn.*, 1937, 34, 663-681.—This article was sent to the board of public relations of the Swedish press concerning a book containing accusations by a former criminal who had been examined in Kinberg's court psychiatric clinic and who had been under other mental observation. This book had been elaborated upon in several articles in a leading Swedish newspaper, and Kinberg appealed to the board of public relations asking that they censure the newspaper in question for having carried unreliable and fantastic stories to the public, and that they direct the Swedish press not to publish any article based upon the

writings of abnormal or criminal individuals until after careful investigation.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4274. Krebs, A. L'esame degli imputati nella pratica penale, specialmente nell'esecuzione della pena, e suoi limiti pedagogici. (The examination of accused persons in penal practice, especially in the execution of the sentence, and its pedagogical limitations.) *Arch. Antrop. crim.*, 1937, 57, 149-172.—Sociological, legal, and psychological aspects of the treatment of criminals are considered together in a report based on practice in a German prison over a period of some ten years. The author establishes the necessity for careful examination of prisoners as a step in making the punishment useful both to them and to society. Heavy stress is laid on the educative function of punishment, and on the responsibility of prison authorities to provide "help toward self-help." An outline of the examination used is presented, and suggestions are made for interpretation and application of the findings.—*C. J. Herrick* (Pennsylvania).

4275. Levin, Y., & Lindesmith, A. English ecology and criminology of the past century. *J. crim. Law Criminol.*, 1937, 27, 801-816.—Excerpts from many pre-Lombrosan English writers of the period 1830 to 1860 indicate the recognition of the importance of sociological factors in crime at that time. The Lombrosan period was an interlude of interruption to these trends of study, but within the last two decades American sociologists are again emphasizing the ecological approach.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4276. Moore, H. K. Confession tests. *J. juv. Res.*, 1937, 21, 76-83.—The study reported here is part of a larger study on delinquency tests. A personal data blank was constructed which aimed to avoid psychoneurotic items, so that the score became merely the number of confessions made. A study of unsigned papers suggests that frankness should be considered as a factor in replies. Detailed findings are not reported, but the inventory is included. 5 references are cited.—*F. M. Teagarden* (Pittsburgh).

4277. Murphy, T. E. The new penology. *J. crim. Law Criminol.*, 1937, 27, 794-800.—A brief discussion of parole boards and parole.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4278. Parratt, S. D. A critique of the Bellman police service rating scale. *J. crim. Law Criminol.*, 1937, 27, 895-905.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4279. Rathsam, B. Kind und Verantwortlichkeit. (The child and responsibility.) *Krim. Mh.*, 1937, 11, 107-108.—The testimony of a child too young to take an oath may be sufficient to convict a delinquent. This applies particularly to exhibitionism, which children observe with curiosity but without repugnance. The "age of protection" (up to 14 years) ascribes to the child a passive role, but nevertheless he has certain rights and responsibilities.

concerning which he should be instructed. He has the right to testify, and should be protected from intimidation, especially on the part of the family, and the possible consequences of his statements should be explained to him.—*M. E. Morse* (Baltimore).

4280. Scanderett, J. J. M. The obsolescence of criminal guilt. *J. crim. Law Criminol.*, 1937, 27, 828-856.—The evolution of the concept of culpability is traced from primitive times to the present. Under the influence of modern sociology, the idea of individual guilt and its punishment for "revenge" is giving way to the concepts of prevention and the protection of society.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4281. Sellers, C. The handwriting evidence against Hauptmann. *J. crim. Law Criminol.*, 1937, 27, 857-873.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4282. Wile, I. S. Further considerations on suicide. *Amer. J. Orthopsychiat.*, 1937, 7, 235-239.—A criticism of "Considerations on suicide, with particular reference to that of the young," by Gregory Zilboorg, from the *Amer. J. Orthopsychiat.*, 1937, 7, No. 1. See XI: 2403.—*E. D. Hunt* (Brown).

[See also abstracts 4229, 4390, 4412.]

INDUSTRIAL AND PERSONNEL PROBLEMS

4283. Azoy, A. Notre méthode d'examen de l'aptitude psychologique des pilotes aviateurs. (Our method of examining the psychological aptitude of aviators.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 203-215.—An extensive program for the examination of pilots was developed in Barcelona on the basis of the following data: personal observation during one hundred flight hours at great height and acrobatic stunts performed with military, transport and sport planes; questionnaires returned by 20 military, 12 transport and 192 private pilots; a statistical study of the causes of accidents; aptitude tests of 338 pilots; a study of the aeronautical activity of 12 transport and 203 private pilots in the performance of their profession. This examination consisted of 18 items which were assigned values from 1 to 20 according to their relative importance as shown by the frequency with which the corresponding trait occurred in the individual profiles. Minimum critical scores were established for each item and an applicant falling below the minimum on any item or failing to accumulate a certain number of points on the test as a whole is eliminated.—*H. Beaumont* (Kentucky).

4284. Bacqueyrisse, M. Contrôle de la sécurité de la circulation. (Increasing the safety of traffic.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 215-220.—A comparison of accident data for the city of Paris for the year 1933 with those for 1923 shows that the number of automobiles and trucks had increased 218% and the number of accidents in which these vehicles were involved 155%. While the

number of buses and street cars had increased 30%, they were involved in 37% fewer accidents. This difference is even more significant when it is considered that only a small proportion of the private cars registered were operated at any one time, whereas most of the public conveyances were in continuous and simultaneous use. Measured in miles, bus drivers and street-car motormen went $5\frac{1}{2}$ times as far in 1933 as in 1923 before being involved in an accident and transported $4\frac{1}{2}$ times as many passengers. Between 1929 and 1933 there was a 77% increase in the number of buses and a 44.5% increase in their average speed, but a decrease of 66% in number of accidents. These improvements are attributed to a rigid selection of drivers and to a transfer of accident-prone employees to other kinds of work.—*H. Beaumont* (Kentucky).

4285. Bahnsen, P. Das städtische psychotechnische Institut in Kopenhagen. (The municipal psychological institute in Copenhagen.) *Industr. Psychotech.*, 1937, 14, 91-94.—The institute was opened in 1923 for the vocational guidance of anyone who applied, and especially for applicants for the police, fire, and other civil department positions. The number tested in 1925 was 501, and in 1935 this number had risen to 3511. This last is classified by the service rendered into vocational guidance, police, fire, guard, railroad employees, street-car and truck drivers, telegraph operators, etc. Standards have been set up for each classification as soon as sufficient data have been gathered. Psychological testing has proven its worth.—*J. C. G. Seidl* (Manhattan College).

4286. Barth, E. Leistungs-charakterologische Auswertung einer Reaktionsprobe. (The evaluation of a reaction test as an indication of characteristics.) *Industr. Psychotech.*, 1937, 14, 75-89.—15 subjects were tested on a laboratory railroad brake problem. The apparatus consisted of a chart showing the field of travel, on the center track of which the test train ran, and two oblique side tracks upon which two other trains approached. At certain points a collision might occur if the train on the center track was not properly braked. The instructions were to avoid a collision by regulating the speed of the test train by the hand brake, but to travel over the chart as rapidly as possible. One fore-exercise of three minutes was permitted, and was followed by eight different test trials of one minute each. These trials were scored (1) in errors: collision, braking too soon, braking too hard, braking not soon enough, and braking too long; and (2) in time, speed of travel. The 15 subjects were divided into 2 groups, 7 who were tested on three different days and 8 who were tested on four different days. On the third day only 3 of the 7 subjects made an error, and on the fourth day only 1 of the 8 subjects made an error. Various characteristics are discoverable, viz., (1) the subject's reaction time is fast or slow; (2) the subject is systematic or not; (3) the subject's attention is concentrated or not; and (4) no definite work placement conclusion can be drawn from this test.—*J. C. G. Seidl* (Manhattan College).

4287. Biegel, R. A. *Méthodes nouvelles pour l'enseignement des opérateurs radiotélégraphistes.* (New methods for the instruction of wireless operators.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 220-222.*—The apprentice wireless operator must be capable of an auditory reception of 125 characters per minute. The usual training technique consists of prolonging the characters themselves as well as the intervals so that a rate of 30 per minute is obtained and gradually increased to 125. When a certain speed is obtained, the characters begin to appear as rhythmic units which have to be learned as such. The new method consists of beginning instruction at a speed of 40 per minute with the characters appearing in their final form, so that only the intervals change during the learning period, which is reduced 40% by this method. The usual procedure of teaching sending involves counting during intervals between characters and words, which, however, must be abandoned again when a speed of 60 per minute is reached. The new method involves primarily the kinesthetic sense through an electric manipulator which gives the student the "feel" of the correct rhythm. The learning period is considerably shorter when this method is used.—*H. Beaumont (Kentucky).*

4288. Biegel, R. A. *New keyboards for typewriters and teleprinters.* *C. R. 8 Conf. int. Psychotech., Prague, 1935, 222-225.*—The rearrangement of the typewriter keyboard involves the following points. The keys which are hardest to strike (shift, back space, etc.) are placed in the center of the keyboard. The shape of the keyboard is modified so as to allow the hands to maintain a natural position and eliminate stretching of the fingers. The keys for the right and for the left hands are grouped in exactly reverse fashion rather than in the conventional congruent position. When moving from one row to another, every finger always follows the same straight line rather than an angular course, thus minimizing errors. Similar changes are proposed for the teleprinter keyboard.—*H. Beaumont (Kentucky).*

4289. Bonaventura, E. *L'examen de l'émotivité dans la sélection des conducteurs des véhicules rapides.* (The use of emotional tests in the selection of drivers of motor vehicles.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 225-229.*—Not the applicant's emotionality is important to us, but his ability to inhibit muscular reactions which might interfere with the proper performance of his task under the influence of an emotional situation. The intensity of cardiovascular reflexes shows no correlation with the reactions of the striated muscles which are involved in the individual's inhibitory ability; hence these reflexes are relatively unimportant for practical purposes of selection. The author considers the most valid test one which registers the amplitude and duration of a muscular disturbance caused either by emotional shock or by prolonged annoying or distracting situations. This disturbance is measured while the subject is engaged

in a manipulatory task involving precise sensory-motor coordination.—*H. Beaumont (Kentucky).*

4290. Cibulka, A. *Zweck und Aufbau der Zentralstelle für Unfallsverhütung im Eisenwerk Witkowitz.* (The purpose and organization of the central safety department of the Witkowitz foundry.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 55-62.*—Data concerning foundry accidents during the past ten years indicate that fully 80% were attributable to human factors (lack of ability, inattention, carelessness, ignorance, etc.). The engineers and technical experts of the safety department, which is associated with the personnel division, have enlisted the aid of members of staff and line departments in carrying out safety regulations. Tools are inspected regularly, work places are kept tidy, regulation clothes are worn and protective devices used. In addition to a rigid psychological selection of personnel, extensive safety propaganda is carried on, including posters, analysis of every accident, and interviews with the employees involved in it. This set-up has been found to pay for itself in decreased cost of accidents and increased output as well as in better working relations.—*H. Beaumont (Kentucky).*

4291. Diringshofen, H. v. *Untersuchungen im Motorfluge: Über den Einfluss der Körperhaltung für das Ertragen hoher Beschleunigungen.* (Aviation studies: influence of posture on endurance of high speed.) *Luftfahrtmedizin, 1936, 1, 226-240.*—Practical trials have shown that an airplane crew can stand a considerably stronger centrifugal force if, instead of sitting upright, they crouch in such a way that the upper part of the body, with head erect, is pressed against the partially flexed thigh. This fact justifies the author's opinion (derived primarily from theoretical considerations) of the importance of decreasing the difference between the levels of heart and brain in order to prevent visual disturbances due to rupture of cerebral and retinal vessels by centrifugal pressure.—*P. L. Krieger (Leipzig).*

4292. Drabs, J. *Nouvelles recherches sur l'aptitude des conducteurs de véhicules rapides.* (New researches concerning the aptitude of drivers of motor vehicles.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 229-234.*—A brief description of tests used in determining the aptitude of automobile and bus drivers with a list of new apparatus developed to measure oculo-kinesthetic perception, emotional reaction, and the fields of attention and visual perception.—*H. Beaumont (Kentucky).*

4293. Elner, J. *Zum Problem der psychischen Auswirkungen der Arbeitslosigkeit.* (The problem of mental effects of unemployment.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 66-73.*—Lack of employment tends to produce peculiar mental effects which frequently persist after re-employment. A group of unemployed salesmen between the ages of 25 and 35 were interviewed in an attempt to determine their reactions to forced idleness. Political parties and slogans had influenced their attitudes toward unemployment (ranging from a sense of

personal failure to one of collective misfortune) and the dole (considered as a rightful demand on society or charity). A new social distinction developed: "we" are the unemployed, "they" are former fellow-workers who still have a job and from whom "we" must keep the secret of "our" unemployment. During the initial phases a feeling of uselessness prevailed, especially in women, but later poverty became the dominating experience, while lack of occupation became habitual. "Hopeless indifference" took the place of rebellion. The feeling of being "useless and different" can be relieved only by supplying work, with or without pay, so that the unemployed can feel himself to be a part of the social structure rather than outside of it.—*H. Beaumont* (Kentucky).

4294. Erdélyi, M. *Das Prinzip der Harmonie in der psychotechnischen Menschengauslese*. (The principle of harmony in psychotechnical selection.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 334-341*.—Not in all cases is the best qualified person the best vocational risk, because other factors (ambition, social status) may compensate for lack of preparation. The "right man" must be selected for his social as well as his personal qualifications. Disproportionate vocational distribution may be caused by external factors (present business conditions, tendency to imitate others, discrepancy between real and imagined aptitudes) or by psychophysical capacity (excess of properly trained people for whom no jobs are available). The former condition can be minimized by rational selection, the latter by emphasizing the intrinsic value of education, extending the circle of "higher" occupations, and employment in occupations where superior education may be utilized in a sideline.—*H. Beaumont* (Kentucky).

4295. Ford, A. *Industrial motion analysis*. (Film.) Chicago: Stoelting, 1929. 264 feet, 16 mm. \$16.65.—Six occupations in a garment factory are shown. The ironing operation is analyzed by means of animated diagrams. A process chart exhibiting therbligs is given.—*L. F. Beck* (Oregon).

4296. Hackl, K. *Wiedereinstellung von Arbeitslosen in den Arbeitsprozess*. (The readjustment of unemployed to the laboring process.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 100-103*.—The unemployed of Vienna may receive further training in their own craft or learn a new craft in courses organized by the industrial commission of that city. These courses are offered only in such fields as suffer a periodic shortage of qualified workers. Enrolment is entirely voluntary and restricted to those who either possess a certain amount of skill in the trade concerned or show sufficient aptitude for it as measured by standardized tests. These limitations were necessary because tuition costs to the city had to be kept low and results had to be as nearly uniformly favorable as possible. It was found that this selection resulted in greater facility of placement; most noticeably, it destroyed the farmer's prejudice against employing

former factory hands and the latter's disinclination to take up farm work.—*H. Beaumont* (Kentucky).

4297. Heinis, H. *Instrumentation pour l'examen et la formation rationnelle du chauffeur*. (Instruments for the testing and rational instruction of automobile drivers.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 234-239*.—The author has developed an adaptation of the Hipp chronoscope, designed to overcome some of its disadvantages, especially when measuring both simple and choice reaction times. This modification has been found helpful in testing driving aptitude and showed that 7% of the applicants were incapable of learning and that the achievement of 60% was inadequate. Employing the usual methods, it takes an average of 7 years of practice to become master of one's car, while accidents reach a peak during the third year. In an attempt to reduce apprenticeship to a minimum, an apparatus has been developed in which the subject controls the speed of an endless strip of motion picture film by operating the instruments of an automobile model. Commands are given visually or orally and a chronoscope measures reaction times, while a registering apparatus records the subject's responses.—*H. Beaumont* (Kentucky).

4298. Hische, W. *Der qualitative Arbeitseinsatz einer Populationsgruppe von tausend Jugendlichen*. (The qualitative work placement of a population group of 1000 youths.) *Industr. Psychotech., 1937, 14, 59-75*.—All subjects had finished the Volksschule and were given all the tests in Hanover, but by different examiners. Seven tests were administered, namely: vocabulary, judgment, memory, spatial relations, techno-constructive thinking, techno-practical thinking, and manual dexterity. These tests and subtests were divided into five groups, namely: theoretical intelligence, practical intelligence, memory, spatial relations, and manual dexterity. A point system was evolved for the scoring which ranged from the best, 14, to the worst, 140. Of eight main classifications made, four could be definitely catalogued: (1) those subjects who, being above the mean in all tests, might be directed into any type of work; (2) those who were theoretically minded; (3) those who were definitely practical in their reactions; and (4) those who would perhaps never be fitted for any position other than unskilled labor.—*J. C. G. Seidl* (Manhattan College).

4299. Kalz, F. *Zur Psychologie und Psychotechnik des Ärzteberufes*. (The psychology and psychotechnics of the medical profession.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 433-435*.—Fifteen characteristics of a good physician are listed in a job analysis, developed on the basis of questionnaires and observations of medical practitioners in the performance of their duties.—*H. Beaumont* (Kentucky).

4300. Korngold, S. *Rôle de l'intelligence dans le travail professionnel*. (The role of intelligence in professional work.) *C. R. 8 Conf. int. Psychotech., Prague, 1935, 239-240*.—A positive correlation was found between scores on a test of logical intelligence

and professional proficiency as demonstrated by railway switchmen who were rated "good" because of their display of initiative and judgment in unforeseen circumstances.—*H. Beaumont* (Kentucky).

4301. Kowalski, W. *Zdatność zawodowa zwrotniczych i nastawniczych*. (The professional capacity of switchmen.) *Psychotechnika*, 1936, 10, 236-250.—The author takes up the problem of which of the 16 tests used by him possesses the greatest diagnostic value for determining the capacity of the lower railroad employees who control the movement of trains. He asserts that the higher employees estimate the personnel better than the lower ones.—*S. Blachowski* (Poznan).

4302. Lahy, B. *Essai d'application des tests musicaux de Seashore à la sélection des radiotélégraphistes*. (An attempt to apply Seashore's musical aptitude tests to the selection of wireless operators.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 241-245.—When Morse signals are presented at a rate of from 50 to 80 per minute, they form a Gestalt which can be perceived only as such. The author believes that this characteristic is due to the musical qualities of the signals. Four of the six tests (pitch, intensity, intervals and rhythm) were given to 100 student operators between the ages of 17 and 22, once shortly after enrolment and again two months later at the conclusion of their apprenticeship period. The reliability was satisfactory, though lower than that reported by American authors, ranging from .48 for intensity to .73 for intervals. There was a marked superiority of these subjects in rhythm and interval discrimination as compared to Seashore's norms, due to previous selection. Correlations with examination grades were: pitch .44, intensity .02, rhythm .45, intervals .22. Since the test now in use (writing down meaningless dot-dash buzzer combinations) has a validity of well over .40, there seems to be no justification for changing to the Seashore test.—*H. Beaumont* (Kentucky).

4303. Lahy, J. M., & Korngold, S. *Recherche expérimentale sur les causes psychologiques des accidents du travail*. (An experimental investigation of the psychological causes of industrial accidents.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 140-147.—The authors examined the records of 500 railway employees whose duties were the same (handling freight and doing general station work), but 200 of whom had been injured at least once in the performance of their duties. All had passed a psychotechnical examination and elaborate psychological profiles were available for every subject. Comparisons showed definitely that accident proneness is not so much detectable by means of tests of motor aptitudes but rather by tests of intelligence and emotional stability. Accident proneness is caused by the subject's inability to adjust himself to the rhythm imposed by the task. If this rhythm is strange to him, he becomes incapable of organizing his mental work and his psychomotor reactions. This condition provokes a state of precipitation

which may lead to clumsy movements and to what is popularly called a loss of "presence of mind."—*H. Beaumont* (Kentucky).

4304. Lahy, J. M., & Korngold, S. *Sélection professionnelle des aiguilleurs*. (The professional selection of railway switchmen.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 245-255.—Psychotechnical tests (pneumograph, sphygmograph, plethysmograph and electrocardiograph) were given to a group of 200 switchmen, half of whom were rated "good" and the other half "poor" by their supervisors. The Yule coefficient of correlation between these judgments and the test results was .97. The tests are now used in the selection of new employees, though it is planned to add a test of emotional stability to the battery.—*H. Beaumont* (Kentucky).

4305. Mayerhofen, G. *Unfallaffinität im Verkehrswesen*. (Accident proneness in the transportation business.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 256.—Marbe's concept of accident proneness is incorrect and dangerous because it ignores the crucial social factor in accidents. Instability of performance is the main symptom of the kind of behavior that leads to frequent accidents. Its occurrence is an indication of a discrepancy between the task and the available psychophysical energy, which may be caused by a neurosis, acute or chronic fatigue or alcoholism, unfavorable environment, etc. Its presence can be detected by reaction experiments (fluctuation of reaction time and certainty of reaction) and by tests of attention (narrowing or fluctuation of attention). A driver's proficiency may be measured by the results of these tests of instability, taking into account also his environmental conditions.—*H. Beaumont* (Kentucky).

4306. Mizzi, A. *Beziehung zwischen diffuser Aufmerksamkeit, Wahrnehmungsschnelligkeit und Schätzung der Geschwindigkeit und Entfernung*. (The relation between diffuse attention, speed of perception, and estimates of speed and distance.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 262-277.—An examination of the test results of 3500 applicants for positions as bus drivers and street-car motormen in Milan showed no relationship between diffusion of attention or speed of perception and the ability to judge speed and distance. Satisfactory results on one of these tests coincided more often with unsatisfactory results on the other than with similar scores, so that any relationship existing was negative. It is suggested that other factors, notably a sense of time and space, might be more closely related to the ability to judge distance and speed, and that great care must be exercised in interpreting test results until a proper test for these factors has been developed.—*H. Beaumont* (Kentucky).

4307. Mls, J. *Intelligenz und Fähigkeit zum Kraftwagenlenken*. (Intelligence and the ability to drive a truck.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 278-284.—During 1931, 1932 and 1933 a total of 749 men took courses in automobile driving in Prague as part of their military training.

There were two types of courses: one for those with and one for those without civil driving experience. Each man's IQ, determined by the Army Beta, was compared with his driving proficiency. Results showed that a minimum IQ of 82 was required for satisfactory performance and that one of 94 corresponded with maximal driving ability, which did not improve beyond this level except in extreme cases (IQ 115). Measured by grades obtained in theoretical subjects which formed part of the courses, a minimum IQ of 80 appeared necessary, but there was no upper limit. Coefficients of correlation between theoretical information and IQ were .44 for the regular course (469 cases) and .43 for the shorter course (280 cases), both of which were reduced by .03 if practical ability was combined with theoretical information. Though intelligence tests permit the elimination of the unfit, they do not select drivers of superior ability.—*H. Beaumont* (Kentucky).

4308. Moede, W. *Psychotechnische Eignungsprüfungen bei den Eisenbahnen Europas*. (Psychotechnical and vocational aptitude testing on the European railroads.) *Industr. Psychotech.*, 1937, 14, 33-41.—A summary of the psychological testing for positions in the various railways in Europe as reported by the representatives of the different countries at the 13th convention of the International Railroads Society in Paris, 1937. *Germany*: Started psychological testing in 1917 for the following positions: (1) workers in shops, maintenance men, etc.; (2) assistants, secretaries, conductors, ticket sellers, etc.; (3) technical workers, apprentices, locomotive drivers, engineers, etc. The functions tested are intelligence, achievement, aptitude, interests, personality and character. *Denmark*: Started testing in 1923, for the same positions as listed for Germany. The tests used are similar. *France*: Started its program in 1930. Today all applicants for any position are examined by tests similar to those used in Germany. *Italy*: Started testing in 1934, follows plan used in Germany. *Austria*: started in 1924, using German methods. *Poland*: began in Warsaw in 1925, in Posen in 1930, following German leadership. *Sweden*: organized in 1934 (see XI: 2883). *Switzerland*: started in 1923 and is following the same general scheme used in Germany. *Spain*: began in 1934, adopting methods generally in use. *Czechoslovakia*: instituted the usual procedures in 1923. A bibliography of 16 titles is listed.—*J. C. G. Seidl* (Manhattan College).

4309. Palme, A. *Der Werkspädagoge in der Textilindustrie*. (The director of training in the textile industry.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 152-159.—The increasing complexity of modern industry has made it necessary to provide a psychologically trained individual to supervise and train the human element. His task consists primarily in: selecting and training new workers, readjusting employees through transfer, selecting promotional material, organizing the labor process, and discharging unadjustable employees.—*H. Beaumont* (Kentucky).

4310. Ponzio, M. *Les temps de réaction et les temps de reprise dans la sélection des conducteurs de véhicules rapides*. (Reaction time and recovery time in the selection of drivers of motor vehicles.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 284-291.—A complete activity cycle consists of three phases: attention, response, recovery. In a series of reactions the period of recovery coincides with preparation for the next reaction. On a number of reaction tests with variable intervals, rank order coefficients of correlation between response and recovery time ranged from .22 to -.23. This shows the necessity of measuring recovery time as well as reaction time in the selection of drivers, since the ability to readjust the organism to a rapidly changing series of stimuli is of importance at least equal to the ability to respond quickly.—*H. Beaumont* (Kentucky).

4311. Raphael, W. *Sources of recruitment and methods of selection of personnel suitable for high administrative positions*. *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 175-177.—Recruitment from outside the organization may take the form of recommendation by present staff members, which method has been found effective in the experience of the National Institute of Industrial Psychology. The process of selecting men from the outside involves detailed information concerning their experience, a personal interview and psychological tests, especially an intelligence test. Many firms attempt to fill higher executive positions by promotion from within, which raises the problem of discovering promotional material early and providing adequate opportunities for training. The most useful methods to accomplish this are: (1) annual ratings; (2) records of exceptional service; (3) notify the staff of vacancies "higher up"; (4) allow promising staff members to assist the executives temporarily; (5) discussion groups under executive guidance.—*H. Beaumont* (Kentucky).

4312. Sokołowska, S. *Co sądzą badani o zbiorowych badaniach psychotechnicznych?* (What do the persons investigated think about collective psychotechnical investigations?) *Psychotechnika*, 1936, 10, 159-167.—On the basis of a questionnaire in which the persons investigated gave their opinion anonymously, the author discovered that 68.7% of those investigated gave a positive judgment as to the investigation, 21.6% a negative judgment, and 9.3% took a neutral position. 25 persons complained of lack of time.—*S. Blachowski* (Poznań).

4313. Studencki, S. *Prüfung von Strassenbahn- und Kraftwagenlenkern mittels synthetisch-analytischer Methode*. (The examination of street-car motormen and bus drivers by the synthetic-analytical method.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 292-293.—Because the synthetic job sample presents the difficulty of interpretation and the analytical tests have the disadvantage of placing the subject in unnatural situations, the personnel bureau of the street railway and autobus systems of Warsaw attempts to combine these methods. First a traffic film is shown while the subject's

responses are recorded and measured; this is followed by a second film which places the applicant in situations in which he needs considerable amounts of certain specified abilities.—*H. Beaumont* (Kentucky).

4314. **Studencki, S.** *Przyczynek do poznania samopoczucia młodziży badanej psychotechnicznie.* (The feeling-tone of the youth investigated psychotechnically.) *Psychotechnika*, 1936, 10, 141-158.—On the basis of a questionnaire the author asserts that among the persons investigated the feeling-tone throughout the psychotechnical investigation is on the whole good; that the nervousness at the beginning generally disappears, and only rarely increases; and that, in spite of long investigations (lasting 2-3 hours) only a few persons feel tired.—*S. Błachowski* (Poznań).

4315. **Vaño, J.** *Les résultats des recherches sur la susceptibilité aux accidents chez les conducteurs de tramways de la ville de Prague.* (The results of an investigation of the accident proneness of street-car motormen in the city of Prague.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 293-302.—A study of the annual accident records of 346 motormen between 1926 and 1933 showed no individual differences in year-by-year accident proneness, but during the first three years of service taken as a whole such differences were obtained. There was a high correlation with performance on psychotechnical employment tests: those in the highest 20% caused 25% of the accidents reported by them between 1927 and 1929, while those in the lowest 20% caused 66% of the accidents in which they were involved. These numbers decrease rapidly with length of service. Of all accidents occurring during their first year of employment, 58.4% were caused by the motormen, but only 8.07% of those occurring during the seventh year of service. Differences in accident proneness during the first three years appear to be due to differences in adaptability. This is also shown by Army Alpha scores in that 16% of the conductors whose scores were below 60 caused 51% of the accidents in which they were involved as compared to 37% for those scoring above 60.—*H. Beaumont* (Kentucky).

4316. **Wienke, F.** *Das Berufserlebnis bei den Lehrlingen des Baugewerbes.* (The vocational experience of apprentices in the building trades.) Hamburg: Riegel, 1936. Pp. 112. M. 3.—*R. R. Willoughby* (Brown).

4317. **Wojciechowski, J.** *L'attitude psychique des fonctionnaires des chemins de fer polonais au cours des investigations psychotechniques.* (The mental attitudes of Polish railway employees during psychotechnical examinations.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 302-307.—A progress report of two Polish examination centers where all railway employees are examined. It has been observed that employees of mediocre intelligence begin to read papers and scientific books in order to learn "to think logically and become smarter" under the influence of the impression made upon them by certain test items.—*H. Beaumont* (Kentucky).

4318. **Yamaguchi, K.** *Psychotechnische Lehrlings-Auslesemethoden bei den japanischen Staatsbahnen.* (Psychological methods of selecting apprentices on the Japanese state railroads.) *Industr. Psychotech.*, 1936, 14, 89-91.—A 20-year record was kept in 21 railroad shops throughout Japan on some 2000 workers. A ratio of 500 hired for 50 positions was found. These positions included machinist, electrician, tool-maker, etc. The apprentices had finished eight years in the "normal" schools, but had had no technical instruction. The apprentice time allotted was one half year trial plus two years of practical instruction in the shop. Today an achievement test for school grade placement is given, followed by an intelligence test. The applicant must pass the first to take the second; after passing the second a complete physical examination is given. Then come 20 days of actual work in each of the various departments, followed immediately by a laboratory test of the work in these individual departments. An interest test is then given to determine what type of work or what section the subject wishes. A rating by each foreman adds to the information gathered for each applicant. These selection methods, used for the last three years, have been found very helpful.—*J. C. G. Seidl* (Manhattan College).

4319. **Zeisl, H.** *Zur Psychologie des Schuhkäufer.* (The psychology of the shoe-buyer.) *C. R. 8 Conf. int. Psychotech.*, Prague, 1935, 196-200.—On the basis of interviews with individuals belonging to different social groups the attitudes of the public towards shoes and shoe stores was investigated. Those on higher economic levels noticed the arrangement of the display and the style of the shoes more than the price and variety of models, which were emphasized by the interviewees of lower economic status. Quality and fit were emphasized by 47% of the men, style by 58% of the women. Fit and quality became of primary importance after the purchase had been completed, but in their selection buyers tended to depend mostly on the firm's reputation, lacking more exact means of determining these attributes.—*H. Beaumont* (Kentucky).

[See also abstracts 3963, 3973, 4013, 4014, 4065, 4082, 4093, 4165, 4278, 4320, 4322, 4328, 4334, 4346, 4347, 4355, 4356, 4357, 4362, 4363, 4374.]

EDUCATIONAL PSYCHOLOGY

(incl. Vocational Guidance)

4320. **Adler, S.** *The occupation of the insurance salesman.* New York: National Occupational Conference, 1937. Pp. 7. \$0.10.—The occupation is appraised with regard to preparation necessary to enter it, financial reward, advantages and disadvantages, associations and organizations giving information regarding it, number employed in the occupation, etc. A bibliography of 19 books and 8 trade journals is listed.—*F. A. Mote, Jr.* (Brown).

4321. [Anon.] Student mortality in the college of liberal arts at the University of Louisville. *Kentucky Person. Bull.*, 1937, No. 19.—A table is presented showing the percentages of withdrawals of September freshman entrants in the college from 1930 through 1934 for each semester of the four years of college.—F. A. Mote, Jr. (Brown).

4322. Bálint, A. Grundprobleme der Berufsberatung. (Fundamental problems of vocational guidance.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 311-318.—The basic problems of vocational guidance can be divided into two groups, those concerning the job and those concerning the individual. The former include: present and future demand for workers of certain qualifications, material rewards, etc. Vocational counselors should keep in mind that barely one-third of all laborers continue in their original line of work, so that the question might be raised whether a man should not be prepared for at least two occupations. The second group of problems involves an evaluation of the individual in terms of health, abilities and character. On the basis of the experience of the social security board in Budapest, which requires a psychotechnical examination of all workers, it is stated that 24% of all employed adolescents chose the wrong occupation from the standpoint of health, 30% from that of ability. It is proposed to rank the various occupations for which a person may be considered according to the formula $V \frac{DPE}{M}$, in

which V is the average annual income, D the probable duration of the individual's capacity to work, P his score on various ability tests, E his score on a character test, M the index figure of the labor market.—H. Beaumont (Kentucky).

4323. Bannissoni, F. Die körperliche Erziehung der Volksmassen in Italien und die Berufswahl. (The physical education of the masses in Italy and vocational guidance.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 319-322.—A total of more than four million children of both sexes between the ages of 6 and 18 are registered with the government for physical training. This organization also sponsors movies, music, lectures, vacation trips, camps, etc. It serves vocational preparation in the following ways: (1) improvement of personality resulting from proper posture, etc.; (2) emphasis on social aspects of labor, which ceases to be a class attribute; (3) increase in good labor material by combating tuberculosis, alcoholism, prostitution, etc.; (4) development of psychomotor activities; (5) accident and disability insurance provides for youthful cripples; (6) discovery and development of leadership; (7) development of respect for manual labor, especially farm work. Leaders in this organization are trained for two years and are required to take work in experimental psychology and psychotechnics. A staff of 3000 physicians is available and elaborate personal histories are compiled on each child, which are of great value in vocational guidance work.—H. Beaumont (Kentucky).

4324. Beatty, J. D. Prospective new fields of occupational opportunity. Pittsburgh: Author, c/o Carnegie Inst. of Technology, 1937. Pap., apply.—R. R. Willoughby (Brown).

4325. Beaumont, H. Grade distributions in introductory courses. *Kentucky Person. Bull.*, 1937, No. 19.—The records of 2500 students taking introductory psychology courses at the University of Kentucky from 1930 to 1933 were examined to determine whether those who made superior grades in the introductory courses would tend to take advanced work more often than those who merely passed. It is found that there are evidently other factors besides grades obtained in the introductory course which are responsible for students enrolling in advanced courses.—F. A. Mote, Jr. (Brown).

4326. Berry, C. S. Public school education of mentally retarded children. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 111-130.—The characteristics of those mentally retarded children who should be given special instruction in the public schools are outlined. Their educational objectives are set forth and plans for their education summarized. Such plans take the form of the special class, the modified special class, and the individual program. Subject matter, methods of instruction, classroom equipment, supplies, placement and follow-up are summarily reviewed.—M. W. Kuensel (Children's Home, Cincinnati).

4327. Betzner, J., & Lyman, R. L. The development of reading interests and tastes. *36 Year. nat. Soc. Stud. Educ.*, 1937, 36, 185-205.—Although tastes and attitudes, like habits and skills, are the products of all related experiences, the authors consider primarily the development of tastes and interests as a problem of the literature and free reading periods of the English classroom and library. Such factors as the specific conditions of contemporary life, the increasing need for the understanding of world affairs, the radio, cinema, increased leisure, etc., are considered in relation to the development of reading interests.—G. F. J. Lehner (Brown).

4328. Boltounoff, A. P. Les principes d'investigation des aptitudes en vue d'une orientation professionnelle fondamentale. (Principles of an aptitude test in connection with basic professional orientation.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 328-334.—Such a test, when given at the end of the child's grade-school career, should include the professionally important aptitudes, those which show individual psychological differences, and those which may be expected to be equally developed in children of all social levels. Consisting of two parts, "information" and "problems," this test (developed in Russia) is constructed in the following manner: a study is made of the trends in professional instruction; the basic techniques of the various branches of instruction are defined; the contents of the principal textbooks in each field are analyzed; from each textbook typical instructional passages are selected from the professional point of view;

this material is transformed into a didactic test.—*H. Beaumont* (Kentucky).

4329. **Brown, C. M.** A social activities survey. *J. higher Educ.*, 1937, 8, 257-264.—A questionnaire study of student social life at the University of Minnesota was made in January, 1934, when a group of student leaders petitioned the president to appoint a committee to "analyze the social needs of students and to make suggestions as to how these needs may be met." Approximately 2500 students, or about 27% of the student body, filled out and returned the questionnaire. Analysis of the returns revealed decided seriousness of purpose on the part of the majority of the students and a tendency to concentrate on their studies and on self-support rather than upon extracurricular activities. Reasons given for nonparticipation in social activities were necessity of employment, lack of funds, lack of time, inaccessibility of campus functions to those living at a distance, lack of opportunity to meet members of the opposite sex, and lack of specific information concerning campus organizations. In light of this survey the committee made 14 recommendations, including instruction in social conventions, social training in secondary schools, more free functions, smaller social affairs, agencies to render special diagnosis and service, opportunities for faculty and students to meet in smaller groups, and a permanent committee to coordinate plans and programs for student social adjustment. On the basis of the recommendations a social activities program is being carried out by student groups, the university administration, and off-campus groups interested in the welfare of the institution.—*R. A. Brotemarkle* (Pennsylvania).

4330. **Caudill, G.** Vocational choices of college students. *Kentucky Person. Bull.*, 1937, No. 19.—A test was made in the fall of 1936 on 427 persons in Berea College in order to determine the vocational choices of the students. Some of the questions asked were: Have you chosen a career? (60.7% gave a definite answer.) When did you make your choice? (65.5% made it while in high school and 34.4% while in college.) What was the guiding factor in your choice? (Special interest 41%; economic interest 10%.) Only 43 different careers out of some 2000 were listed, and teaching was chosen by nearly half of those responding. There is no indication that vocational choice was made with an adequate reason.—*F. A. Mote, Jr.* (Brown).

4331. **Cavan, J. T.** What kind of college gets the bright students? *J. higher Educ.*, 1937, 8, 265-272.—In an attempt to "explore the college characteristics associated with ability to recruit brightness" the author compared scores received by entering freshmen on the American Council on Education psychological examination with the types and characteristics of collegiate institutions as obtained from the April 1933 issue of the *Educational Record*, without knowledge of the names of the institutions. The median of these medians was obtained to show the level of ability typical of one group of institutions

as compared with another group. A weighted measure to show "the level of ability typical of the students rather than typical of the colleges in a group of institutions" was also used. Results indicate that in the recruiting of brightness private institutions have the advantage over public and over teacher-training colleges; four-year colleges over junior colleges; eastern and mid-western institutions over those in other sections of the country; institutions with large enrollment over those with small student bodies; and nationally accredited colleges over regionally accredited or non-accredited institutions. Institutions which recruit the brighter students are further characterized by situation in metropolitan areas; high percentage of retention; relatively high expenses of the student; relatively high tuition and general charges; relatively high income from endowments; and relatively high "effective educational income per student."—*R. A. Brotemarkle* (Pennsylvania).

4332. **Cunningham, W. F.** The freshman religion placement test. *Cath. educ. Rev.*, 1937, 35, 274-283.—Reports of the first year of use by 25 colleges of a new objective achievement test of religious knowledge.—*W. L. Wilkins* (Notre Dame).

4333. **Dean, L. E.** Experimental sense training of a deaf-blind child. *Welf. Mag.*, 1937. Pp. 15.—A child born deaf and blind was trained for two months in such activities as walking, eating, playing with toys, vocalization, feeling speech, etc. Progress in these activities is reported, accompanied by better emotional adjustment.—*F. A. Mote, Jr.* (Brown).

4334. **De Schweinitz, D.** Occupations in retail stores; a study sponsored by the National Vocational Guidance Association and the United States Employment Service. Scranton: International Textbook Co., 1937. Pp. 435. \$2.75.—Detailed descriptions of 45 occupations in retail selling, intended for use in counseling and personnel service in schools, businesses and public employment offices, and for those looking for careers in business.—*R. R. Wiloughby* (Brown).

4335. **Desclos, —, Barrier, —, Bougle, —, Gastinel, —, Laugier, —, & Luc, —.** Enquête sur le baccalauréat. (Investigation on the baccalaureate degree.) Paris: Hachette, 1935. Pp. 120. 25 fr.—This study was prepared under the auspices of the "Commission française pour l'enquête Carnegie sur les examens et les concours en France." It consists of seven chapters: (1) general statistics regarding the number and distribution of candidates according to institutions of instruction; (2, 3, 4) social conditions of the candidates and of the scholarship students; (5, 6) candidates having studied in public institutions, either primary or secondary; and (7) private institutions.—*M. H. Piéron* (Sorbonne).

4336. **Durrell, D. D.** Individual differences and their implications with respect to instruction in reading. *38 Yearb. nat. Soc. Stud. Educ.*, 1937, 325-356.—The author discusses (1) the causes of individual differences, such as intelligence, sensory

capacities, physical conditions, language equipment, rate of learning, response to motivation; (2) how they may be discovered in the classroom through standardized test records, attitudes and interests in reading, the level of reading ability, abilities in comprehension and interpretation, etc.; and (3) administrative provisions for individual differences in the classroom, such as providing suitable materials, individual guidance and instruction, and small groups within the class.—*G. F. J. Lehner* (Brown).

4337. Fife, R. H., Faucett, L., Palmer, H., West, M., & Thorndike, E. L. *Interim report on vocabulary selection for the teaching of English as a foreign language*. London: P. S. King, 1936. Pp. vii + 506.—The report discusses the purpose of a list of 2400 words and general criteria of word values. The words are classified according to function and content and brief sentences are given illustrating the varieties of meaning. The Committee on Modern Languages has undertaken to distribute the report to persons and agencies responsible for the teaching of English in Latin America, Hawaii, etc. An important feature of a list of basic problems for investigation concerns the methods of teaching a language to persons of foreign speech.—*F. A. Mote, Jr.* (Brown).

4338. Gates, A. I. *The measurement and evaluation of achievement in reading*. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 359-388.—The author discusses (1) the characteristics and purposes of comprehensive diagnostic inventory examinations; (2) the merits and limitations of various special methods of measurement and appraisal, such as standardized tests, informal tests, analysis of errors, questionnaires and self-inventories, ratings, etc.; and suggests (3) programs for the various grades.—*G. F. J. Lehner* (Brown).

4339. Gates, A. I. *Diagnosis and treatment of extreme cases of reading disability*. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 391-416.—After discussing such causes of extreme disability in reading as low intelligence, constitutional and educational immaturity, special mental defects, physical deficiencies, bodily injuries and defects, defects of sensory apparatus, temperament and personality differences and inadequate motivation, guidance and teaching, the author considers the methods employed in the diagnosis of extreme cases of reading difficulty—which consist primarily in applying testing techniques to the above mentioned causes of reading disability. The place of the specialist in remedial reading is emphasized.—*G. F. J. Lehner* (Brown).

4340. Goodykoontz, B. *The place of reading in the curriculum*. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 41-62.—The author discusses (1) the evolution of reading in the curriculum, (2) its increasing importance in all curricular fields (subjects), (3) the reading period in the present-day curriculum, from the point of view of (a) reading as a subject and (b) the scheduled reading period, (4) the place of independent reading in the curriculum, and (5) reading in

relation to current problems in curricular organization, such as reading curricula for beginners and for those of limited reading ability.—*G. F. J. Lehner* (Brown).

4341. Grave, C. E., & Muse, A. *An experiment in progressive education in a private school for exceptional children*. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 137-146.—Subnormal children from privileged homes have been conditioned to dependency. They inherently lack adaptability. But in spite of these difficulties, with proper training they are able to develop along personal and social lines. A school program was designed which furnished them with experiences from life based on their interests and needs at the time. The burden of teaching, that of thinking, planning and doing, was thus transferred from the teacher to the child. Curricular changes are described.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4342. Gray, W. S. [Ed.] *Tests and measurements in higher education*. Chicago: Univ. Chicago Press, 1936. Pp. 237. \$2.00.—(Courtesy *Child Developm. Abstr.*)

4343. Gray, W. S. *A decade of progress*. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 5-21.—In his review of the growing importance of reading the author discusses (1) desirable trends, (2) undesirable trends, (3) developments in educational theory and practice, (4) results of scientific studies, (5) the importance of reading in contemporary life, and (6) the basic principles and assumptions underlying the committee's recommendations.—*G. F. J. Lehner* (Brown).

4344. Gray, W. S. *The nature and types of reading*. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 23-38.—An effort is made "to define reading in sufficiently broad terms to embrace its essential uses in contemporary life, to describe significant purposes of readers, and to suggest important problems involved in improving achievement in reading." As here conceived reading includes not only recognition, comprehension, and interpretation, but also the application of the facts apprehended in the study of personal and social problems. The various types of reading as based on the reader's general attitude and specific purposes are discussed.—*G. F. J. Lehner* (Brown).

4345. Gray, W. S. *The nature and organization of basic instruction in reading*. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 65-131.—Attention is directed to the nature and organization of instruction by means of which fundamental reading attitudes and habits may be economically and effectively developed. Two motives underlie the program recommended: (1) to provide appropriate initial teaching, to secure development of right attitudes and habits and prevention of wrong ones, and (2) "to promote growth at each level of advancement sufficient to insure maximal achievement in all reading activities in which children engage both in and out of school."—*G. F. J. Lehner* (Brown).

4346. Healy, M. G., & McNamara, M. Teaching as an occupation. New York: National Occupational Conference, 1937. Pp. 12. \$0.10.—Here teaching as an occupation is discussed regarding preparation necessary, number of persons employed in teaching, probable future, advantages and disadvantages, etc. A bibliography of 95 books is listed.—F. A. Mote, Jr. (Brown).

4347. Heinis, H. L'âge le plus favorable pour l'entrée en apprentissage. (The most favorable age for entering apprenticeship training.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 341-346.—A battery of physical and psychological tests was given to 1641 boys and 642 girls between the ages of 13 and 20. The author concludes that aptitudes mature at the conclusion of physical puberty and the beginning of mental puberty. At that time interest in realities is greatest, impressions are gained most readily, and vocational techniques established most rapidly. While character formation goes on the adolescent is in the most favorable condition for vocational apprenticeship.—H. Beaumont (Kentucky).

4348. Hoffman, W. S. Predictive selective admissions. *Sch. & Soc.*, 1937, 45, 829-831.—Recognizing that high rank in some schools is not always followed by college success, the Pennsylvania State College has used the average college rank of former students with a similar record in the same school as a basis for prediction. Those with low predicted college standing were admitted only if they scored high in an aptitude test. The rather satisfactory agreement between prediction and the class tenth attained by the 1307 incoming freshmen of last year is shown by graph and table.—M. Lee (Chicago).

4349. Kilpatrick, W. H. [Ed.] The teacher and society. First yearbook of the John Dewey Society. New York: Appleton-Century, 1937. Pp. vi + 360. \$2.50.—R. R. Willoughby (Brown).

4350. Kraus, H. Die Auswirkung der Wirtschaftskrise auf Berufswahl und Berufsberatung. (The effects of the economic crisis on vocational choice and vocational guidance.) *C. R. 8 Conf. int. Psychotech., Prague*, 1935, 347-355.—During a crisis vocational guidance counselors must take into consideration the mental effects of economic distress on parents, children and employers. Not only must aptitudes be determined, vocational choices classified and vocational information supplied, but an attitude toward vocations and life in general must be established on a rational basis. Education and society as a whole may profit from the experiences of vocational guidance counselors to minimize the disastrous effects of an economic depression.—H. Beaumont (Kentucky).

4351. Manuel, H. T. Results of the 1936 college testing program. *Res. Bull. Texas Comm. Coordination Educ.*, 1937, No. 5. Pp. 23.—This bulletin gives the results obtained from administering the American Council on Education psychological examination, the Cooperative English test, and the Strong vocational interest blank to students of 35

cooperating educational institutions of Texas, with comments on the results.—F. A. Mote, Jr. (Brown).

4352. Marguerite, Sister M. Aims in arithmetic. *Cath. educ. Rev.*, 1937, 35, 284-293.—The study of arithmetic and its place in learning to think.—W. L. Wilkins (Notre Dame).

4353. McKee, P. Vocabulary development. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 277-302.—The author discusses the two major tasks of developing a reading vocabulary: (1) the development of a rich meaning vocabulary, i.e. the building of concepts, understandings, or meanings, and (2) the development of word recognition, i.e. the ability fluently to identify words, phrases, and other printed symbols used to represent the concepts or meanings in reading matter.—G. F. J. Lehner (Brown).

4354. McQuitty, J. V. Student mortality in relation to scores on the Kentucky classification test. *Kentucky Person. Bull.*, 1937, No. 19.—1476 freshmen who entered the University of Kentucky were given the Kentucky classification test and their scores computed. Scholarship was measured by grades obtained in all subjects during the 8 semesters immediately following entrance. Results show that about $\frac{1}{3}$ of those who entered as freshmen remained after 8 semesters; the rate of mortality is about six times as great for the lowest group of 3% as for the highest same percentage, and a student who stands two sigma or more above the mean has 76 out of 100 chances of finishing 8 semesters and 40 in 100 of getting a degree. It is also found that the chance of completing the semesters with a satisfactory grade is much greater for those in the highest two groups than for those in the lowest two.—F. A. Mote, Jr. (Brown).

4355. Morgan, DeW. S. Linotype operation as an occupation. New York: National Occupational Conference, 1937. Pp. 7. \$0.10.—In this pamphlet the occupation of linotype operation is considered as to what a person does in it, the abilities necessary, number of persons employed in it, distribution of those employed, etc. A bibliography of 23 books and 2 trade journals is listed.—F. A. Mote, Jr. (Brown).

4356. Murphy, J. F. Waiters and waitresses. New York: National Occupational Conference, 1937. Pp. 6. \$0.10.—This pamphlet considers the occupation of waiter or waitress with regard to the financial rewards, advantages and disadvantages, union requirements, etc. A bibliography of 12 books and 6 magazines is given.—F. A. Mote, Jr. (Brown).

4357. Noall, I. S. Pharmacy as an occupation. New York: National Occupational Conference, 1937. Pp. 8. \$0.10.—Here are given the abilities necessary for entering the profession of pharmacy, financial rewards, probable trend of employment, advantages and disadvantages of the profession, etc. A list of 35 books and 2 trade journals is given.—F. A. Mote, Jr. (Brown).

4358. Paul, V. A. The improvement of oral reading. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 305-323.—The author considers the social value of

oral reading and the fundamental factors involved in good interpretation, and presents practical suggestions for improving and refining the oral interpretation of the printed page.—*G. F. J. Lehner* (Brown).

4359. Pennington, L. A. *Mental hygiene in the teachers college*. *West. Ill. St. Teach. Coll. Quart.*, 1936, 16, 5-23.—An analysis of the training facilities in the field of mental hygiene offered by the teachers college is presented. As a constructive teaching approach in an attempt to meet these needs, a modified procedure akin to the Morrison plan and the contract method was introduced. A guide sheet for the work of each unit was given to the student at the beginning of the term, and each student contracted for an A, B, or C grade. Class procedure and instruction were treated as a socializing process. The results obtained indicate that such a socialized learning process adapted to the capabilities and desires of the individual student is possible and that teaching techniques can successfully keep pace with scientific advances made in related fields.—*E. T. Raney* (Brown).

4360. Pressey, S. L., & Janney, J. E. *Casebook of research in educational psychology*. New York: Harper, 1937. Pp. xvii + 432. \$2.00.—A compilation of research studies from some forty professional journals and books, extensively edited by the authors for the stated purpose of: (1) stimulating student interest in the great range offered in the field of educational psychology, (2) furnishing contact with research methods, (3) revealing the resources in the use of professional journals, and (4) demonstrating the practical importance of research. These research cases are employed to illustrate and illuminate different aspects of such major concepts of educational psychology as health, interests and incentives, social development and emotional stress, intelligence, individual differences, educational measurement, types of learning, efficiency in learning, attitude and character traits, transfer of training, fatigue, and the results of schooling. The editing and summaries which bind the cases together make no attempt to arrive at final conclusions, but demand and stimulate critical thought on the part of the reader. The book is intended as a supplement for student use rather than a basic text.—*D. Bailey* (Mt. Holyoke).

4361. Rogers, H. W. *The reliability of college grades*. *Sch. & Soc.*, 1937, 45, 758-760.—A study made at Lafayette College shows there is a positive correlation between term grades, which decreases regularly as the interval between them increases. The average correlation between the 1st and 2nd term is .80 and that between the 1st and 8th is .48. Grades in January are better predictors of grades in June (.79) than are June grades for those in the following January (.72). The correlations are higher at the beginning than at the end of the college course. The average correlation between grades, hence their average reliability, is .66.—*M. Lee* (Chicago).

4362. Sandell, M. L. *Photography as an occupation*. New York: National Occupational Conference, 1937. Pp. 11. \$0.10.—This pamphlet discusses photography from the standpoint of what one does in this occupation, whether camera man, assistant to the camera man, retoucher, finisher, etc., what is known regarding the abilities essential to success in it, etc. A list of 7 schools of photography and one of career books, pamphlets, annuals, magazines, and books on photography are given.—*F. A. Mote, Jr.* (Brown).

4363. Schoettler, A. E. *The occupation of the barber*. New York: National Occupational Conference, 1937. Pp. 7. \$0.10.—This abstract discusses the occupation from the standpoint of what a person does, preparation necessary, union requirements, number of persons employed, etc. A bibliography of 13 books and 2 trade journals is given.—*F. A. Mote, Jr.* (Brown).

4364. Smith, M. R. *Student aid*. *Teach. Coll. Contrib. Educ.*, 1937, No. 704. Pp. vii + 152.—The subjects, full-time graduate students at Teachers College, Columbia, were divided into (1) a group receiving financial aid (380), (2) a group applying for aid but rejected (541), and (3) a control group (1102). The sources of data were application blanks, registrar's records, questionnaires, records in financial office, records in office of advanced school of education, recognition lists, faculty evaluations. The groups are compared on the basis of (1) characteristics, (2) scholarship, (3) verbal ability, (4) ratings of completed theses, (5) subsequent careers, (6) points of view concerning financial aid in Teachers College. In general the award group first studied in the institution, accumulated graduate points in Teachers College, and were in residence when the grant decision was made. The differences in scholastic achievement and subsequent careers between the award and the non-award groups are not significant. The bibliography lists 46 titles.—*J. M. Stalnaker* (Princeton).

4365. Snedaker, M., & Horn, E. *Reading in the various fields of the curriculum*. *38 Yearb. nat. Soc. Stud. Educ.*, 1937, 133-182.—The authors are concerned with (1) the basic importance of reading as an essential tool in study, (2) the relation of reading to literature, (3) the contribution of an enriched curriculum to the development of ability in reading, (4) the relationship of wide reading to the enrichment of the content subjects, (5) the responsibility of all teachers for the effective direction of the reading pertinent to their curricular fields, and (6) suggested methods and means for developing efficient reading habits.—*G. F. J. Lehner* (Brown).

4366. Starrak, J. A. *Matching ability and achievement*. *J. higher Educ.*, 1937, 8, 315-320.—For the past five years a committee of student progress at Iowa State College has been developing a program concerned (1) with the determination of the capacity of each student to carry college work, and (2) with the stimulation of students judged capable of completing a four-year college course but working

below their capacities. For each student judged capable, on the basis of a preliminary rating, of completing a four-year course creditably, three ratings are reported: a preliminary freshman rating based on intelligence-test score and high-school average, a revised freshman rating based on preliminary freshman rating and average mark earned during the first quarter, and a final prediction rating based on preliminary freshman rating and freshman year average. Record is kept of the progress of students whose average marks each quarter fall below their predicted ability rating, and also of those who, though falling within the rating, show a "persistent and accelerating decline." The following suggestions of the committee for the realization of its objectives have been acted upon favorably: investigation of causes of failure; a systematic program of personal development in cases involving personality defects; use of inspirational methods; special privileges for students working up to or above indicated ability; study rooms for study between classes; reduction of credit-hours of students working below indicated ability. Other suggestions have been rejected or tabled for the present.—*R. A. Brotemarkle* (Pennsylvania).

4367. Symonds, P. M. *Life problems and interests of adults. Teach. Coll. Rec.*, 1936, 38, 144-151.—Members (184) of a graduate class in education ranked fifteen areas of human concern in order on the basis of personal problems and also as to interest in reading and discussing such matters. The greatest problems have to do with money, a philosophy of life, mental and physical health; the greatest interests are in philosophy, mental health, character, and civic affairs.—*J. M. Stalnaker* (Princeton).

4368. Thalman, W. A. *The use of objective tests in Illinois schools. Sch. & Soc.*, 1937, 45, 781-784.—A preliminary nation-wide inquiry revealed that no surveys have been made of the extent to which objective tests are now used, but all state superintendents state that they favor their use. In Illinois a questionnaire was then submitted to county superintendents and 1526 teachers in one-room rural schools, town and city elementary schools, and high schools. 56.5% of the teachers prefer the use of a combination of informal type of objective examination and essay. 30.4% use standardized achievement tests also and 25% use intelligence tests. County superintendents estimate that 24.6% of teachers use all three types of test, very few use one form only, 22.5% use informal objective tests and essays, and 16.6% use intelligence tests. But 72% of the superintendents advocate the use of all three types and 72.4% the use of intelligence tests also. Both teachers and superintendents think there has been a decided increase in the use of objective tests since 1932, that more would be used if they were available, and that a course in tests and measurements should be included in every teacher's training.—*M. Lee* (Chicago).

4369. Trow, W. C. *Introduction to educational psychology.* Boston: Houghton, Mifflin, 1937. Pp. xii + 417. \$2.00.—As a basis for selecting material the criteria of general interest and of importance in educational theory and practice have been employed. Emphasis is placed on significant findings which contribute to an understanding of oneself and one's acquaintances as well as of the pupils one is expected to teach. Chapters on motivation, emotion and personality comprise 20% of the contents; individual differences and their measurement, 20%; sensation and perception, including a description of the receptors, 15%; principles of learning and memory, including a description of the physiological basis of behavior, 35%; imagery, 5%, and genetic growth and development, 5%. Many illustrations are included. At the close of each chapter there are pertinent questions and references. A glossary and supplementary reference list are found in the appendices.—*E. T. Raney* (Brown).

4370. Tuttle, H. S. *Cultivating social motives. J. higher Educ.*, 1937, 8, 321-328.—Since data collected from 275 college executives revealed a lack of unanimity as to situations and procedures which are effective means toward character building and the cultivation of social-mindedness, the author made a study of 400 freshmen in four selected colleges to determine the correlation between all measurable campus agencies and gains in social attitude. A social orientation test was constructed for the measurement of social attitudes. When the degrees of social concern at the beginning and end of freshman year were compared larger gains were noted among (1) those who read progressive magazines; (2) those who worked to help pay their way through college; (3) those who participated in off-campus service projects; and (4) those enrolled with certain staff members. No significant relationship was discovered between intelligence quotients or college grades and social concern, indicating that the development of social attitudes is distinct from acquisition of informational background. Such evidence points to the necessity of conscious provision for the cultivation of social concern by distinct agencies or the expansion of curriculum to produce the same effect. The author regards his findings as inclusive and "of less concern than the techniques employed and the implications for further research."—*R. A. Brotemarkle* (Pennsylvania).

4371. Uhl, W. L. *The materials of reading. 36 Yearb. nat. Soc. Stud. Educ.*, 1937, 207-253.—The author considers: (1) types and content of material and equipment essential to an adequate reading program for the various levels from the primary grades to the junior college, (2) the relation of reading materials to the maturity and ability of readers, (3) mechanical features of books, e.g. design and size of type, length of line and leading, (4) illustrations and other visual aids, and finally (5) the relation of reading materials and equipment to school achievement.—*G. F. J. Lehner* (Brown).

4372. Vanuxem, M. A state educational system for the mentally retarded. *Proc. Amer. Ass. ment. Def.*, 1936, 41, 278-284.—A state department of special education is needed to promote and coordinate the work of developing economic assets instead of economic liabilities from the mentally retarded found in the public schools. Teachers should be required to take a four-year course of training in special education, with practice whenever possible in state institutions for mental defectives or in hospitals for mental disease. Early recognition by means of mental tests should be made in order that these pupils may be properly and immediately classified at school. Their training should be along academic and industrial lines as well as along lines of social adaptation. It is necessary to educate the public to the need for such specialized training.—*M. W. Kuenzel* (Children's Home, Cincinnati).

4373. [Various.] A college looks at its program. New Concord, Ohio: Muskingum College, 1937. Pp. 336. \$3.00.—This book is written for the purpose of solving problems in Muskingum College by an experimental scientific analysis, first, of their nature, and second, of apparently reasonable solutions. It is a series of studies divided into seven parts: the Muskingum program, experimental studies, tests and testing, aims and objectives, curriculum supervision, character education, and administration.—*F. A. Mote, Jr.* (Brown).

4374. Wells, S. The occupation of the motion picture actor. New York: National Occupational Conference, 1937. Pp. 9. \$0.10.—This pamphlet discusses the occupation from the point of view of the abilities and preparation necessary to enter it, numbers employed, advantages and disadvantages, etc. A bibliography of 95 books and 2 trade journals is listed.—*F. A. Mote, Jr.* (Brown).

4375. Williamson, E. G. Students and occupations. New York: Holt, 1937. Pp. 461. \$2.50.—*R. R. Willoughby* (Brown).

4376. Yoakam, G. A. The reorganization and improvement of instruction in reading through adequate supervision. *36 Yearb. nat. Soc. Stud. Educ.*, 1937, 419-438.—The author discusses the modern conception of supervision and supervisory problems, and points out the steps involved in organizing such a program. An outline of guiding principles for the supervisor is given.—*G. F. J. Lehner* (Brown).

4377. Young, K., Drought, N., & Bergstresser, J. Social and emotional adjustments of freshmen at the University of Wisconsin. *Amer. sociol. Rev.*, 1937, 2, 166-177.—A random sample of one-third, or 250 of the total 750 freshman men, was selected for special study. The discrepancy, in grade-point units, between actual grades in freshman year and grades predicted from high school percentile rank and the American Council psychological test, was calculated for each student. Personality measurements obtained with the Bell adjustment inventory and with the Wisconsin scale of personality traits showed uniformly negligible correlations with this

discrepancy. The students' background and present collegiate situations were studied by the interview method. Differences in incidence of certain environmental factors are reported between students whose achievement exceeded prediction by .80 grade points or more, and those showing equal discrepancy in the other direction (11 and 27 cases respectively). Several cases are presented briefly to make the point "that the situational factors as such are not important apart from the inner state or attitude of the person experiencing that situation."—*I. L. Child* (Yale).

4378. Zulliger, H. Über eine Lücke in der psychoanalytischen Pädagogik. (An omission in psychoanalytical pedagogy.) *Z. psychoanal. Pädag.*, 1936, 10, 337-359.—Basically, psychoanalytical pedagogy should concern itself somewhat with individual problems and the affective and libidinous relationships between two individuals, but primarily with the investigation, understanding and conscious development of mental relations between a group and its leader. The psychoanalytically trained teacher uses all the phenomena known to this science to determine his attitude towards his pupils, but he does not "analyze" them individually. As a result, pupils in his classroom substitute the group-ideal for their ego-ideal and identify their egos with each other. The emphasis of psychoanalytical pedagogy in the future must shift from the individual to the group, about which comparatively little is known at present.—*H. Beaumont* (Kentucky).

[See also abstracts 3994, 4002, 4060, 4179, 4209, 4236, 4249, 4316, 4396, 4407, 4411.]

MENTAL TESTS

4379. Asher, E. J. The relation of item validity to item difficulty. *Kentucky Person. Bull.*, 1937, No. 19.—By the use of a formula designed to get at validity coefficients it was found that scores made by subjects taking the Kentucky general scholastic ability test show very little relation between the difficulty of a test item and its validity.—*F. A. Mote, Jr.* (Brown).

4380. Oberlin, D. S. Verbal and manual functions at the preschool level. *Delaware St. med. J.*, 1937, 9, 15-18.—The items included in psychometric tests may be divided into non-verbal or concrete items and verbal or abstract ones. Individuals tested by such a scale frequently have more difficulty with one type than the other. These differences (when they occur) are operative at an early age and may persist throughout life unless treatment is undertaken to modify them. A single psychometric test may erroneously lead one to consider such cases defective. Poorly correlated verbal and non-verbal scores presage some difficulty which may be modified. The lower score is useful in indicating the source of the child's maladjustment. The value of analyzing Merrill-Palmer test results into psychometric patterns of this sort is discussed.—*M. Keller* (Brown).

4381. Sokolowska, S. *Test katalogowy*. (Catalogue test.) *Psychotechnika*, 1936, 10, 220-236.—This test, which was applied originally by M. Tramer and subsequently by F. Baumgarten, consists in the subject's writing down 10 titles that he would like to read from a book catalogue especially drawn up for this purpose. The author's investigations show that the test gives excellent results, demonstrating the characteristic features of the mentality of investigated persons.—S. Blachowski (Poznań).

[See also abstracts 4087, 4152, 4195, 4247, 4328, 4414.]

CHILDHOOD AND ADOLESCENCE

4382. Anderson, H. H. *Children in the family*. New York: Appleton-Century, 1937. Pp. 265. \$2.00.—A guide to the training of normal preschool children for physical, mental, and emotional well-being—for parents, educators, and others.—R. R. Willoughby (Brown).

4383. Baley, S., Rybicka, E., Derwisz, M., & Mentlik, M. *Badania nad etyką i estetyką dzieci w wieku przedszkolnym*. (Investigation of the ethics and esthetics of children in the preschool age.) *Polsk. Arch. Psychol.*, 1935/36, 8, 193-283.—The social behavior was investigated by means of tests of division (for instance, the child had three chocolates to divide between himself and his partner) and by means of collaboration tests (e.g., the building by two children of a house of blocks). The esthetic behavior was investigated as follows: each boy (or girl) was asked to draw the most beautiful boy (or girl) possible and the ugliest possible boy (or girl). The authors later describe the development of social (ethical) and esthetic behavior of children, pointing out that in the preschool period many changes take place, especially in ethical behavior.—S. Blachowski (Poznań).

4384. Beer, E. S. *The day nursery as a laboratory*. *J. juv. Res.*, 1937, 21, 83-91.—Besides giving a brief history of the day nursery movement the article makes a plea for more scientific studies of children in day nurseries. "Other methods must be devised to trace every child who leaves the day nursery. . . . No longer can it be considered merely an institution to relieve working mothers. . . . Today the function of the day nursery includes definite responsibility for the development of its children."—F. M. Teagarden (Pittsburgh).

4385. Bender, L., & Schilder, P. *Suicidal pre-occupations and attempts in children*. *Amer. J. Orthopsychiat.*, 1937, 7, 225-234.—Examination of a number of cases of attempted suicide among children (cases from the children's ward in Bellevue Hospital) leads the authors to the following formulation concerning suicidal tendencies in childhood: the child reacts to an unbearable situation, usually deprivation of love, by aggression which punishes the parents, or seeks to demand of them more love than they have given. To a child death is not

considered an irreversible deprivation.—E. D. Hunt (Brown).

4386. Brunner, M. *Beeinflussung des Stotterns*. (Influencing stuttering.) *Z. psychoanal. Pädag.*, 1936, 10, 360-365.—A two-year-old boy was cured of stuttering by the following method. Apparently his condition was caused by regression, since during his suckling period he had been seriously ill and now had a very poor appetite. It was arranged to allow him to return to this previous level by supplying him with candy suckers. After a few days this return was so complete that he had discarded his previously acquired habits of cleanliness, but had ceased stuttering. Three months later he had re-acquired bladder and bowel control, his appetite had improved, and his speech control had become perfect.—H. Beaumont (Kentucky).

4387. Coghill, H. de F. *Significance of children's wishes in psychiatric examinations*. *Amer. J. Orthopsychiat.*, 1937, 7, 270.—Children's wishes elicited in psychiatric examination were correlated with "problem as referred" and "problem as revealed after clinic study." The correlation between the wishes and "problem as referred" was lower than that between the wishes and "problem revealed." There was low correlation between wishes and school failure, and between wishes and poor group adjustment. For the most part the wishes showed a preponderant need for security.—E. D. Hunt (Brown).

4388. DuVall, E. *Child-parent social distance*. *Sociol. soc. Res.*, 1937, 21, 458-463.—A questionnaire relating to child-parent relationships was given to 458 Los Angeles children ranging in age from 12 to 17 years. Approximately half of the group were underprivileged, while the others were "run of the membership" from the local Y.W.C.A. and Y.M.C.A. A social distance index was used in the comparison of the underprivileged and the average children with regard to relative social nearness to their fathers and their mothers. Some of the group differences which are statistically significant are as follows: (1) the adjusted group appears closer to both parents; (2) boys and girls in both groups are closer to mothers than to fathers; (3) girls in both groups are closer to both parents than are boys; (4) younger children show greater social nearness to each of their parents; (5) greater social nearness is found where families are smaller; (6) mothers are consistently taken as models more frequently than fathers; (7) underprivileged children evaluate parental disciplinary methods as being too strict, while the average group think their parents are too easy.—O. P. Lester (Buffalo).

4389. Faulkes, W. F. *Placement of the physically handicapped crippled child*. *Crippled Child*, 1936, 14, 94-98.—(Courtesy *Child Developm. Abstr.*)

4390. Fenton, N. *Child guidance in California communities: Part 3. The child guidance conference*. *J. juv. Res.*, 1937, 21, 91-112.—This article discusses the organization and uses of the child guidance conference, which "is essentially the gathering together of a group of school officials for

the systematic and thoughtful study of a maladjusted child." The device was made necessary by the fact that the demand for mental-hygiene studies of children far outran the facilities of the trained personnel of the California Bureau of Juvenile Research. Local variations in administration are shown, as well as dangers to be avoided. Participation by teachers, nurses, visiting teachers and others is outlined. "The response of the teachers as a group improves when they understand the purpose of the conference. . . . Often the change in attitude of the teacher toward the child as a result of the conference is alone worth many times the amount of time and energy involved." 19 references on the work in California and similar enterprises are given.—*F. M. Teagarden* (Pittsburgh).

4391. French, J. R. P. Youth in partnership. *Child Study*, 1937, 14, 106-108.—(Courtesy *Child Developm. Abstr.*)

4392. Fries, M. E. Factors in character development, neuroses, psychoses and delinquency. *Amer. J. Orthopsychiat.*, 1937, 7, 142-181.—A detailed case history is given as a preliminary report of procedure in the author's study of "character in the making" through a study of pregnant women, following them through labor, delivery and post partum periods; also their babies from birth through early infancy. To date the author has found it valuable to investigate physical, mental, emotional and sociological factors in their interrelationships and effects on the inherited constitution, and considers the parent-child relationship as the most important single factor in character formation. Symptomatic psychotherapy yielded beneficial results, but its advantages, as compared with those of deep psychotherapy, have not yet been proven. Both types were more efficacious when administered to the parents during the mother's pregnancy than later; also, therapy during these earlier periods was easier, as the parents were more cooperative than after maladjustments had been definitely established.—*E. D. Hunt* (Brown).

4393. Giltay, M. Sur l'apparition et le développement de la notion du nombre chez l'enfant de deux à sept ans. (On the appearance and development of the notion of number in children from 2 to 7 years.) *J. Psychol. norm. path.*, 1936, 33, 673-696.—The author is interested in answering the following questions: To what extent does the notion of quantities exist in a young child who does not yet know the names of numbers? How is this idea of number used and can it be observed in the actions of children? By what signs can one tell whether a child's idea of number is more or less concrete or abstract? How does mental retardation affect a child's notion of number? The author devised several interesting problems with candies, boxes, etc. as experimental material. With these he tested several groups of children of different chronological and mental ages. He concludes that, although 2-year-olds can differentiate between one and many, at 4 years of

age appear the first manifestations of analysis and synthesis.—*R. E. Perl* (New York City).

4394. Gindl, I., & Hetzer, H. Unangemessenheit der Anstalt als Lebensraum für das Kleinkind. (Unsuitableness of the institution as a home for the small child.) *Z. angew. Psychol.*, 1937, 52, 310-358.—60 infants, 20 from an institution, 20 with foster parents, and 20 from their own homes, were compared in various behavior manifestations. Results indicate that those in institutions do not compare favorably with the other two groups, particularly those children below the third year. The differences for those between 3 and 6 years are not so great, but in either case a foster family is to be preferred to an institution when separation from the true parents is necessary. The defect of the institution lies primarily in its artificiality and monotony.—*G. F. J. Lehner* (Brown).

4395. Hardy, M. C. Adjustment scores of adolescents having a history of frequent illness during childhood. *Amer. J. Orthopsychiat.*, 1937, 7, 204-209.—Comparison of health records with results from psychological examinations for a group of subjects under observation from childhood until 19 to 22 years of age revealed a low negative relation between frequency of illness during childhood and personality adjustment scores at adolescence and early maturity. The implication of these results is that relatively frequent experience in the illness situation during childhood is not a handicap to personality development and may tend to stimulate the development of wholesome attitudes toward the realities of environment.—*E. D. Hunt* (Brown).

4396. Jersild, A. T. Curriculum maker—know your child. *Childh. Educ.*, 1937, 405-409.—This is a discussion of the interdependence of the roles of learning and growth from the point of view of the necessity of fitting the curriculum to the child's maturity. Various aspects of the problem are considered and research findings referred to, such as work on the recognition of skills, abilities, motives and difficulties, etc.—*F. A. Mote, Jr.* (Brown).

4397. Jersild, A. T. Research in the development of children. *Teach. Coll. Rec.*, 1936, 38, 129-143.—An address reviewing the literature on the mental and emotional development of the child, which stresses studies with which the author has been associated. Investigations are reported dealing with (1) children's fears, (2) children's social behavior, (3) the development of concepts, and (4) the promotion of skills.—*J. M. Stalnaker* (Princeton).

4398. Kuntz, L. F. The unsocial child. *Cath. educ. Rev.*, 1937, 35, 326-337.—Discussion of the influence of teacher- and parent-induced inferiority feelings on sociability.—*W. L. Wilkins* (Notre Dame).

4399. Landau, A. Angsterlebnisse eines Dreijährigen. (Traumatic experiences of a three-year-old boy.) *Z. psychoanal. Pädag.*, 1936, 10, 366-378.—A three-year-old boy presented, when entering kindergarten, the picture of a frightened, neurotic and often aggressive child. He was allowed to

express his fears, which were analyzed and gradually eliminated. It was found that they were caused by repression of his excessive masturbation during his second year of life. This had been brought about by his sharing his parents' bedroom, which made him a frequent witness of their intercourse. His masturbation was not merely auto-erotic but an attempt at expressing his Oedipus conflict.—*H. Beaumont* (Kentucky).

4400. Langford, W. S. Anxiety attacks in children. *Amer. J. Orthopsychiat.*, 1937, 7, 210-218.—Anxiety attacks occur most frequently in serious-minded and worrisome pubescent girls who have previously shown personality disorders in the nature of fear reactions, feeding problems, enuresis, and overconcern about their health. An awareness of the emotional factors is important for the early recognition and handling of the attacks and prevention of chronic invalidism.—*E. D. Hunt* (Brown).

4401. Laufer, M. Nachuntersuchungen an hyperkinetischen Kindern. (Follow-up investigations on hyperkinetic children.) Berlin: Fr. Linke, 1937. Pp. 30.—*R. R. Willoughby* (Brown).

4402. Levy, D. M. Studies in sibling rivalry. *Res. Monogr. Amer. Orthopsychiat. Ass.*, 1937, No. 2. Pp. 96.—The first paper, "Use of play technique as experimental procedure," presents statistical studies of sibling rivalry, showing the frequency of the problem in presumably normal family life, its relation to size of family, age difference in siblings, and maternal attitude. The second paper, "Hostility patterns in sibling rivalry experiments," gives a detailed study of a large number of control-situation experiments. The author concludes that "the feelings of children can be revealed through activity in play situations, so organized as to satisfy the requirements of experimental procedure and yet sufficiently flexible to allow abundant variety of behavior. The meaning of this behavior can be determined by careful study of the sequence of events, considering the relations of the items in terms of purposeful activity, as in any empirical investigation."—*E. D. Hunt* (Brown).

4403. Lickteig, Sister M. A., & Rauth, J. E. A review of the literature on the suggestibility of children. *Cath. educ. Rev.*, 1936, 34, 143-151.—*W. L. Wilkins* (Notre Dame).

4404. Lippman, H. S. Suitability of the child for adoption. *Amer. J. Orthopsychiat.*, 1937, 7, 270-273.—To determine how those engaged in mental hygiene work deal with the problem of child adoption a representative group was sent a list of questions dealing primarily with the suitability of the child for adoption. The replies revealed great dependence upon personal opinions and "hunches" in lieu of any scientific data on the subject.—*E. D. Hunt* (Brown).

4405. Nagy, M. I. A gyermek és a halál. (The child and death.) Budapest: 1936. Pp. 108.—Children occupy themselves with the fact of death as not a general but a personal problem, interesting

more from the emotional than from the intellectual side. Their intellectual problems are: (1) What is death? (2) Reason and aim of death; (3) alterations in and after death. Affectively there are dominant pain, fear, opposition, and curiosity. Their intellectual comprehension of death is evaluating, whereas affectively there is to be found an ever growing alienation against the idea of death and an inability to see it as a natural fact. Environment is not able to determine, but only to influence the child's attitude toward death. Bibliography.—*P. Ranschburg* (Budapest).

4406. Newman, H. H., Freeman, F. N., & Holzinger, K. J. Twins: a study of heredity and environment. Chicago: Univ. Chicago Press, 1937. Pp. xvi + 369. \$4.00.—Part I contains a review of previous studies and of techniques for diagnosing zygosity. Part II describes studies of 50 pairs of identical compared with 50 pairs of fraternal twins (all pairs reared together), and Part III presents the results of studies of 19 pairs of identical twins reared apart. The division into identical and fraternal types is paralleled by a bimodal distribution of differences between the test scores of members of the pairs, and identical twins are again found to be more alike than fraternal twins. Correlational analysis, analysis of variance adapted to show the relative effect of nature and nurture, the effects of age, and case studies of identical twins reared apart all indicate that physical traits are least affected by environment, ability and achievement scores more, and personality and temperament most. There are a number of other fairly specific conclusions, but the influences of nature and nurture constitute "not one problem but a multiplicity of minor problems," and "there is no general solution of the major problem nor even of any one of the minor problems."—*J. McV. Hunt* (Brown).

4407. O'Rourke, L. J. A study in social behavior. *Teach. Coll. Rec.*, 1937, 38, 678-685.—8000 committees totaling 54,000 pupils of the 4th, 5th, and 6th grades made up lists of specific things which cause a person to be disliked or liked. Results are discussed. This is the first step in a more elaborate study.—*J. M. Stalnaker* (Princeton).

4408. Reca, T. Trastornos emocionales en la infancia. (Infantile emotional perturbation.) *Psiquiat. y Criminol.*, 1936, 1, 509-520.—Emotional maladjustment and related factors should be taken into account not only in determining etiology but also in guiding treatment. Cases are presented which show that emotional reactions appear to produce morbid behavior. It is recommended that both extrinsic and intrinsic factors responsible for the development of emotional maladjustment be isolated and treatment prescribed with reference to such factors. Bibliography.—*R. M. Bellows* (U. S. Employment Service).

4409. Robinson, B. C. Failure is too costly for the school child. *Parents' Mag.*, 1936, 11, 22-23.—(Courtesy *Child Developm. Abstr.*)

4410. Scheidemann, N. V. *The psychology of exceptional children*. Vol. II. New York: Houghton, Mifflin, 1937. Pp. viii + 460. \$3.25.—This book is written for teachers. "The types treated in this volume are not so numerous as those dealt with in Vol. I." The first of the eleven chapters deals with the nervous system. There follow chapters on: the cerebrally birth-injured child; the postencephalic child; the enuretic child; the albinistic child; the preschizophrenic child; the child afflicted with puberty praecox; the prematurely born child; the bilingual child; the eidetic child; and the congenitally syphilitic child. A glossary follows the last chapter. The book abounds in tables, charts, diagrams, and case histories. The text of each chapter is highly documented and is followed by a shorter list of selected references.—*F. M. Teagarden* (Pittsburgh).
4411. Schnell, J. *Gyermeklélektani tanulmányok*. (Investigations on child psychology.) [Comm. R. Hung. Inst. Child Psychol.] 1935-36, I. Pp. 195.—Contents: 1. Psychopathology of childhood, by Joh. Schnell. Mental prophylaxis in childhood. The idea of psychopathy. Structural foundations of psychopathy: (a) somatic, (b) psychogenic, (c) environmental. Psychotherapeutic methods used in childhood. The status of the care of psychopathic children in (a) foreign countries, (b) Hungary. What we are able to do. Literature. 2. Role of natural scientific psychology in middle-school teaching, by Imre Molnár. 3. Psychological examination of preschool children, by Magda Dénes. 4. Difficult children as a general pedagogic problem, by Erica Barcza. 5. Psychical crises in the light of statistics, by Elemér Hajós. 85% of the child material of the ordination of 1934-35, 84% of that of 1932-33 were only, youngest and first-born children. The least number of difficult child patients came from the middle-born (first-born 24, youngest 32, only 28, middle-born 15%). 6. Playing room and its diagnostic and therapeutic role, by Dr. Béla Szilárd. Postencephalic alterations of character in childhood as a pedagogic problem, by Ilon Kovács. Two cases of talent evolution of psychosis in middle-school girls.—*P. Ranschburg* (Budapest).
4412. Schulze-Steinen, I. *Die deutsche Forschung nach den Ursachen der Jugendverwahrlosung in den letzten drei Jahrzehnten*. (German investigations on the causes of neglect of adolescents in the last three decades.) Bielefeld: Anstalt Bethel, 1935. Pp. 94.—This is a review of the literature on this topic in the fields of psychology, education, health, psychiatry, sociology and religion, especially the works of Gruhle, Gregor, Voigtländer, Cimbäl, von Heimann, and Többen. In the introduction the nature and kinds of neglect are discussed in various aspects. Then the questions, test materials and methods used by the various investigators are detailed, and last a comprehensive view of the disposition and environment as causes for this negligence. The author concludes that the cause for the amount and types of neglect is the same in all the investigations studied. Problems are set up for further study.—*J. C. G. Seidl* (Manhattan College).
4413. Segers, J. E. *Nouvelles observations relatives à la perception des couleurs chez l'enfant*. (Recent observations relative to the perception of color in babies.) *Arch. belges Sci. Educ.*, 1936, 2, 52-56.—As pictured in a film made by the late Dr. Decroly, the behavior of a girl six months of age who had to choose between three feeding bottles containing blue, white, or red liquid confirmed the statement which Rähmann and Decroly had previously made, namely that a child is able to recognize white before the age of 12 months.—*R. Nihard* (Liège).
4414. Uhler, C. *Wide span psychometric patterns*. *Delaware St. med. J.*, 1937, 9, 1-6.—90 children were selected for extensive range of inherent intelligence components as a preliminary study of the possible relationship between intellectual types and forms of maladjustment. Subjects were divided into two groups; one group displayed high psychomotor dominance, the other high verbal dominance. It was found that: wide disparities between verbal and psychomotor intelligence were rare; a strong hereditary psychopathic taint was present in the family histories of children with wide span disparity; such children showed a marked tendency toward the development of serious personality defects and psychoses, especially when the psychomotor ability was the lower; children with higher psychomotor ability were referred mostly as delinquent problems, least as problems of personality defect; children with higher verbal ability were referred mostly as personality defects and least as delinquents.—*M. Keller* (Brown).
4415. Volkmann, E. *Über die Formkraft des Vorbildes für die Charakterprägung in der Reifezeit*. (The formative power of example for character molding in puberty.) Würzburg: Triltsch, 1936. Pp. 68.—*R. R. Willoughby* (Brown).
4416. Walker, W. [Ed.] *Child welfare case records*. Chicago: Univ. Chicago Press, 1937. Pp. 596. \$3.00.—*R. R. Willoughby* (Brown).
4417. Yerkes, R. M., & Bingham, H. C. *Glimpses of chimpanzee behavior from infancy to maturity*. (Silent film.) New York: Instructional Films, Inc., 30 Rockefeller Plaza, 1933. 1 reel, 355 ft., 16 mm., 12 min. \$2.50 rental per use-day; \$27.50 sale.—Produced by Yale Laboratories of Primate Biology. A general or synoptic film which shows infants, children, and adults in characteristic behavioral relations; mothers and infants; mutual grooming (commonly mistaken for parasite-hunting); responses to various simple tests of intelligence; cooperation of the animals with the experimenter; the procedure of physical measurement.—*R. M. Yerkes* (Yale).
- [See also abstracts 3994, 4002, 4029, 4072, 4094, 4133, 4147, 4179, 4189, 4195, 4258, 4270, 4279, 4282, 4333, 4380.]

